

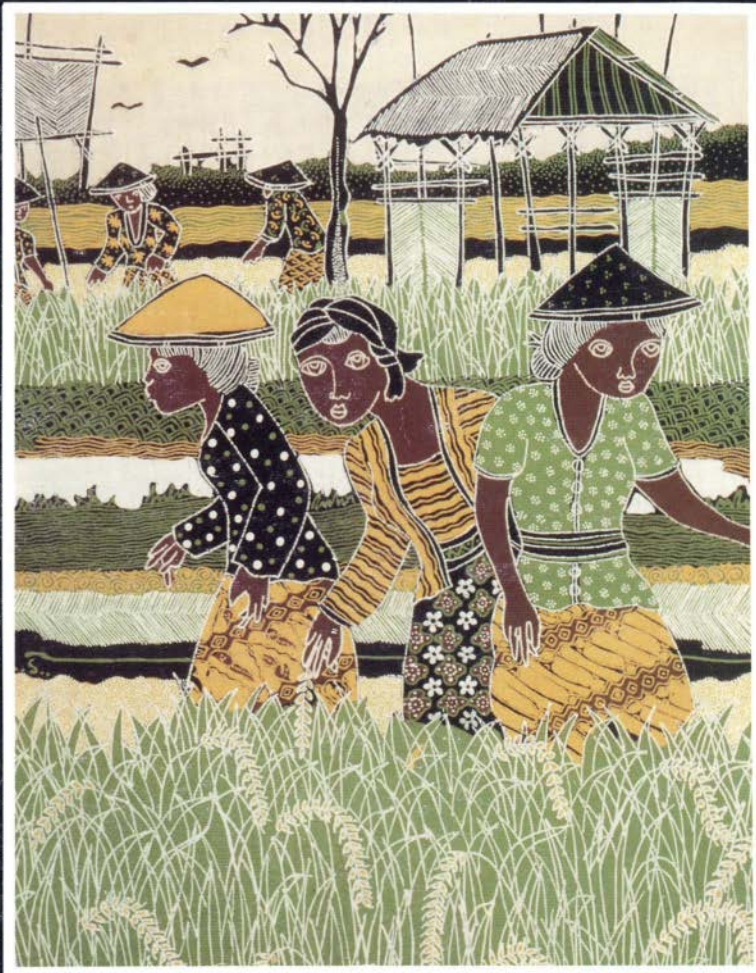
NEW
EDITION

University Partnerships
International Cooperation
Sustainable Development

Windows on the World

Windows
on the
World

Ian McAllister
Editor



Ian McAllister, Editor

Lester Pearson
Institute for
International
Development

NEW EDITION

**Lester Pearson Institute
for International Development**

Dalhousie University
Halifax, N.S., Canada B3H 3J5
Tel: 902-494-2038
Fax: 902-494-1216

The Lester Pearson Institute for International Development (LPI) was founded in 1985:

- to make a sustained contribution to international development through the effective stimulation and organization of Dalhousie's teaching, research, extension and project resources;
- to enrich the teaching and research of the university through the involvement of students, faculty, staff and associates in international development activities; and
- to advance public awareness and understanding of international development issues and Canada's role in international activities.

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(Indonesia)
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Windows on the World

- ***University Partnerships***
- ***International Cooperation***
- ***Sustainable Development***

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Ian McAllister: Editor

**Lester Pearson Institute for
International Development
Dalhousie University**

**First Published in 1993
Second (Revised) Edition, July, 1994**

This book explores the role and a cross-section of international activities of a university as a partner in quest of sustainable development. The work represents part of a follow-up commitment of the Conference on University Action for Sustainable Development, held in Halifax, December 9-11, 1991. The conference was co-sponsored by the International Association of Universities, the United Nations University, the Association of Universities and Colleges of Canada, and Dalhousie University.

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Foreword

Dalhousie, as a major Canadian University, has long had extensive international involvements. Located in the port city of Halifax, on Canada's east coast, facing towards Europe and with historical ties to European countries, Africa and the Caribbean, Dalhousie has seen its international connections grow substantially in recent years. They now extend world-wide.

While our faculty members, as in any research-oriented university, have their numerous individual links with colleagues in other countries, the majority of Dalhousie's institutional linkages have been supported financially by the Canadian International Development Agency (CIDA) and the International Development Research Centre (IDRC). This has been the typical pattern for most Canadian universities. Such projects usually develop from the personal contact of a Canadian faculty member with colleagues in universities in less developed countries, but are institutional projects in that they are based on formally negotiated agreements between CIDA/IDRC, the Canadian University, in this case Dalhousie, and the partner institution.

This book by Prof. McAllister consists of a detailed study of over twenty such projects in which Dalhousie is, or has been in recent times, involved with external support. In each study, the nature of the project and of the linkage arrangement with the sister institution is described and discussion is presented on the extent to which the project has been able to achieve its original objectives. Equally significantly, the impact that the project has had internally on Dalhousie is considered.

These studies will be of value to all Canadian universities and to many others. Those within the university community believe very strongly in the importance of the contributions of universities to international development. Yet we have much to learn and the contents of this book will contribute enormously to the growth in our understanding.

Howard C. Clark
President and Vice-Chancellor
Dalhousie University

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Many have contributed to making this book a reality. First, there are the authors, some of whom I have badgered mercilessly for manuscripts, when all they had initially anticipated was to present a seminar. Second, thanks are due to Deborah Brown who conscientiously worked evenings and weekends to copy-edit and generally help refine a succession of drafts. I am most grateful to Monique Comeau, Heather Lennox and Cheryl Stewart for cheerfully typing to my unreasonable deadlines. Marian MacKinnon's assistance in both providing data and additional copy-editing support was much appreciated. Thanks are given to Ethel Langille and John Kozij (for helping organize the initial seminar series), to Patricia Rodee (who not only oversaw the financial arrangements, but always contributed constructive ideas to facilitate the process on behalf of the Pearson Institute), to Robert Comeau (for reviewing the entirety of the manuscript), to Patricia Betts (for periodic logistical and editorial support), to Barbara Patton (for helping in the final phase - with cover planning and printing arrangements); to the students in my graduate class in development economics - who kindly reviewed each chapter and whose ideas resulted in a restructuring of the original approach. Last, but certainly not least, I am indebted to the friendly and helpful way all the Pearson Institute team helped make both the book and the seminar series not just a possibility, but a most pleasant experience.

Ian McAllister

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INTERNATIONAL PARTNERSHIPS AND DEVELOPMENT COOPERATION: INTRODUCTION AND SUMMARY OF SOME MAIN FINDINGS

by Ian McAllister

The theme of this book is 'international partnerships and development cooperation'. The emphasis is on the experiences of a Canadian university from linkages that extend from China to South Africa, from the Baltics to Guyana.

The primary functions of a university, wherever it be located, are essentially three:

- Teaching and information exchange;
- Research and information storage;
- Community service - both within its region and beyond.

The weight a particular university may place on these functions is likely to vary over time and between sections of that same university at any one period. Obviously there are many refinements that will occur within and beyond such broad categories. Some universities or faculties may focus more on undergraduate or graduate education, some on particular themes (such as agriculture or health), some on a normative as distinct from positive research emphasis, some on locally circumscribed, rather than internationally oriented, community services or 'outreach'. Most universities will have benefited, at critical stages, from support from other universities — frequently in a distant country. Such support may have been for one, or a combination, of the three primary functions noted above. At various times in history, and still in some regions of the world, universities have stood guard for social justice, democracy and morality in alien environments. At their best, universities have been power houses of new ideas, of the best elements of civilizations and of moral leadership to both older and, particularly, younger generations. At their worst, they have been self-serving, isolated elites — living pretentiously off 'the public trough' and the very ideas espoused have been rigidly presented and counter-'educational'. No institution is perfect and no doubt some warts can usually be found. Open links with the international community have been recognized by many universities to be important safeguards of intellectual and moral integrity.

Most universities will have benefited, at critical stages, from support from other universities — frequently in a distant country.

Open links with the international community have been recognized by many universities to be important safeguards of intellectual and moral integrity.

The cases in this book have been selected because, in all but one example, they have an international dimension. The exception is Chapter 12, which was written to introduce a regional and somewhat

parallel dimension — the integration of native peoples. Six general fields are included: oceans and development; economic development and public administration; business studies and development; community development, social work and education; the environment and development; teaching, research and community services. Three broad papers precede them. In the first, Jim MacNeill, formerly Secretary-General of the Brundtland Commission and latterly an adviser at the Earth Summit, discusses the implications of the Rio conference. Alexander Kwapong, in the second paper, brings together some of his perspectives on the global challenges facing universities, an outcome of many years as a senior university leader. In the third paper, John Berry, recently head of the international programmes branch of the Association of Universities and Colleges of Canada (A.U.C.C.), draws on his personal perspectives of universities across Canada and their international approaches.

Some projects have focused far more on one or other of the three primary functions of teaching, research and community service.

It will be seen, from the cases reviewed, that some projects have focused far more on one or other of the three primary functions of teaching, research and community service and, indeed, that some — from the 'role of a university' vantage point — serve to raise critical questions about appropriate future balance and strategies.

The regions into which the cases are linked, for the large part, are in the 'Third World'. The cases all have direct, or close, links with Dalhousie University — a privileged university (in relative terms) of one of the world's wealthiest nations.

The period under discussion encompasses the past two decades, a time during which Canada became increasingly involved in supporting development cooperation between Canadian and international institutions, a time also when demands both for aid and institutional delivery systems increased substantially.

Concepts of development and the appropriate roles of institutions, as agents of change, have been widely explored in the context of development theory and national policies, of market and 'control' economies, of regional government and official development agencies, of state corporations, multi-national corporations and development banks. In the case of non-governmental organizations, such as (for examples) Oxfam and the Red Cross/Red Crescent — the importance of local capacity building has become increasingly recognized and their experiences are being documented and rationalized. In the case of universities, as 'partners in development cooperation', the work has been surprisingly under-researched. That can be expected to change as more and more universities join in a stock-taking of their experiences. Several reasons for this increased interest can be suggested. These include a growing (but precarious) dependency on international 'development aid' funding by many universities, in both rich and poor countries; pressures on student places and the implications of further internationalizing student (and faculty) bodies; and changing attitudes by

the public (and governments) as to the regional and target population priorities (as well as appropriate 'delivery mechanisms') for development aid.

Many of the cases included in this book are not, in a 'purist' sense, 'development' projects. By saying that, it is meant that many of the activities did not begin with 'development' goals in mind, but often solely as an extension of a research interest in Canada or overseas, as a response to a particular request for training support, or for some quite limited community or service linkage. Most of the cases relied heavily on the initiative and commitment of but one or two individuals.

Most of the cases relied heavily on the initiative and commitment of but one or two individuals.

Most of the project activities reviewed have, at some critical stages at least, benefited from the financial support of one or other of Canada's major aid financing agencies, the Canadian International Development Agency (CIDA) and the International Development Research Centre (IDRC). CIDA was established in 1968 and the IDRC in 1970 — both much influenced by the work of Lester Pearson and his UN report, 'Partners in Development'. Canadian foreign aid policy is not discussed in any overall manner in this book, despite its obvious influence on many of the project activities and the close involvement of many of those working on the projects with facets of Canadian aid policy (both foreign and regional) formation. However, a number of observations and suggestions are made which might prove of value to Canadian aid policy-makers.

The fact that all of the projects reviewed have links into Dalhousie University is both a limiting and potentially a contributing factor. It is limiting inasmuch as many equally or possibly more interesting Canadian university overseas linkage projects are not included. It may be useful, however, as the projects serve to show how they have impacted on, and evolved out of, a single educational institution whose main priorities have never been 'international development', but whose structures and human resources have, individualistically, demonstrated a considerable degree of flexibility and a sustained commitment to that theme.

Dalhousie University, located in Halifax on Canada's eastern seacoast, is a middle-sized institution — by Canadian university standards, with a (1993) student complement of some 11,000, (see Table 1 for a breakdown as of Dec/93). Of these, approximately 85 percent are full time students, over 40 percent are registered in graduate or professional programmes (e.g. law, health professions, management studies) and somewhat less than 5 percent are (according to visa criteria) from overseas. Table 2 provides a breakdown of the main undergraduate and graduate fields pursued by visa students. Table 3 illustrates the countries of residence of the 'visa students'. Many other students at Dalhousie also have foreign origins, but, because they now enjoy landed-immigrant or Canadian citizen status, they are not identified in the table. Some quite substantial changes have occurred over the past

student numbers and countries of origin. The early part of the 1980s saw an influx into Canada (and Dalhousie) of students from Malaysia and Hong Kong. This declined in the mid-eighties. China and Bermuda have subsequently provided many more students to Dalhousie, while the international linkage projects have resulted in groupings of students from countries not represented prior to the linkage, or only very occasionally (for examples, Indonesia, Zimbabwe, Ghana, Nepal and Tanzania).

TABLE 1
Student Enrollment by Faculties
(1 December 1993)

Faculty	FT	PT	Total	Of Whom are Visa Students
Arts and Social Science	1,879	378	2,257	36
Science	2,709	275	2,984	108
*Education	108	11	119	*
Management	709	43	752	65
Health Professions	1,265	242	1,507	8
Medicine	715	0	715	26
Law	453	10	463	1
Dentistry	207	0	207	1
Graduate Studies	1,353	611	1,964	261
Totals	9,398	1,570	10,968	504

Source: calculated from data from Registrar's Office.

* (Not formally 'a faculty', but a teaching school. All 14 visa students were in the graduate programme. Table 2, which breaks numbers down by undergraduate and graduate level fields of study, provides more information especially on the breakdown of graduate studies).

During the past two decades, centres and institutes have served to play an important role, across the university, in facilitating new focal points of emphasis to be developed.

At the time of writing, Dalhousie University has 8 faculties, housing the academic departments and schools. Additionally the university contains a number of centres and institutes. Indeed, during the past two decades, centres and institutes (the terms have been used interchangeably) have served to play an important role, across the university, in facilitating new focal points of emphasis to be developed — whether for teaching, research or community service activities. Whereas departments have been quite rigidly structured (and somewhat 'traditional bases' for faculty and academic programmes), centres and institutes (drawing much of their funding from external resources) have

tended to allow for more flexibility and have fostered (when working well) interdisciplinary research, innovative teaching, community services and imaginatively designed programmes and projects. At the same time, the relationships between centres and institutes (which have substantially drawn upon faculty contributions of leadership, technical skills and management time) and departments have not always been well-meshed — for examples in faculty hiring practices and priorities, in the teaching and guidance of students, in the design of curricula, and in the integration and recognition of research and publications as a vital essence of a university's mission.

At the same time, the relationships between centres and institutes and departments have not always been well-meshed

TABLE 2

Visa Students by Level and Field of Study (Dec. 1, 1993)
(Fields including 10 or more visa students)

Field	Undergraduate	Graduate and Professional Schools
Biology	12	39
Business Administration	-	14
Chemistry	8	21
Commerce	65	-
Computing Science	13	2
Economics	14	23
Education	-	14
English	5	6
Health Professions & Medicine	-	34
Law	1	10
Mathematics	4	8
Marine Management	-	11
Oceanography	-	20
Political Science	3	11
Psychology	8	3
Other	74	81
Subtotals	<u>207</u>	<u>297</u>
TOTAL DALHOUSIE VISA STUDENTS		<u><u>504</u></u>

Source: Calculated from data from Registrar's Office.

The building of bridges between individual initiatives and development projects and academic programmes has been one of the most difficult but critical components of the institution building experience.

Several centres/institutes and university committees have played particularly important roles in facilitating and supporting many of Dalhousie's international activities, albeit committed individuals have essentially been at the heart of the projects and programmes. Indeed, the building of bridges between individual initiatives and development projects and academic programmes has been one of the most difficult but critical components of the institution building experience. On the one hand, entrepreneurial faculty members have often underestimated the value of basic administrative systems; on the other hand, there has been a periodic tendency for administrators to overemphasize bureaucratic procedures and neglect to recognize the 'life spirit' that gives the spark that makes projects successful. Among the key centres and institutes that have helped support international development activities have been:

- the Lester Pearson Institute for International Development. This was founded in 1985 to promote Dalhousie's involvement in international development activities and, in 1989, absorbed the Centre for Regional and International Development Projects and was given responsibility for the overall coordination of Dalhousie's international development programmes and projects (but not the academic ones, which remain within faculties). The day to day management of projects normally remains with particular centres and departments;
- the School for Resource and Environmental Studies (SRES), which started as an institute and is now responsible for the Master of Environmental Studies programme;
- the Centre for International Business Studies, which has played an important role in encouraging an international stream to the MBA options;
- the International Transport and Ocean Policy Studies Centre and International Oceans Institute, from which important ocean policy and training programmes have been mounted — including on the law of the sea and ocean boundary disputes;
- the Centre for African Studies, which mounted a variety of international conferences and research studies — largely in the fields of history, women's studies and political science, but then faded as its earlier supporters retired or moved on;
- the International Students' Centre, which has played an important supporting role for overseas' students.

TABLE 3

Visa Students at Dalhousie University, by Country

Country	December 1, 1993	December 1, 1982
China	63	15
Bermuda	46	27
Hong Kong	41	96
USA	39	68
Malaysia	25	155
Saudi Arabia	19	8
Zimbabwe	18	3
UK	16	66
India	13	23
Bahamas	12	5
Indonesia	12	10
Kenya	11	1
Ghana	10	9
Singapore	10	20
Nigeria	7	14
Germany	5	9
Greece	2	12

Students of other countries at Dalhousie (Between 1-8), Dec. 1, 1993

Antigua*, Antilles, Argentina, Australia, Bangladesh*, Barbados, Belgium, Belize, Botswana, Brazil*, Bulgaria, Cayman Islands, Chile, Croatia, Egypt, Ethiopia, Fiji, Finland, France*, The Gambia, Guyana*, Iran*, Ireland (Eire), Israel, Ivory Coast, Jamaica, Japan*, Libya, Malawi, Maldiv Islands, Mexico, Nepal, Netherlands, New Zealand, Norway, Philippines*, Poland, Romania, St. Kitts, St. Lucia, St. Vincent, Seychelles, Sierra Leone, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Tanzania, Thailand, Trinidad and Tobago, Uganda, Vietnam, Ukraine, Yugoslavia, Zambia.

* Indicates between 5-8 students.

Source: Calculated from data from Registrar's Office.

Key committees that have served to articulate broader university international policies and to encourage relationships between projects include the Senate Advisory Committee on International Development (SACID), the Ocean Studies Council, the Senior Academic Administrators' Meeting (S.A.C. Admin) and the Sustainable Development Working Group.

A number of academic departments generated teaching courses and programmes that were oriented towards international development themes.

In the late 1970s and early 1980s, a number of academic departments (sometimes at the instigation of centres) generated teaching courses and programmes that were oriented towards, or directly supportive of, international development themes. Principal among these programmes were the masters in development economics (MDE) and the masters in environmental studies (MES). Other programmes, such as the masters in business administration (MBA) and the new masters in marine management (MMM) introduce strong developmental elements and can reasonably be expected to include more over time. Classes in subjects such as marine biology, geology, the law of the sea, disaster relief, humanitarian law and development contribute important support for Dalhousie's international work and also draw from it. Table 2 shows that biology, medicine/health professions, economics and oceanography attracted by far the largest numbers of graduate and professional students, reflecting the international commitments of faculty in those departments. Various undergraduate classes have also clearly identified developmental themes and an expanding undergraduate programme in international development studies now exists at Dalhousie (with links also into Saint Mary's University in Halifax). Thus far its student body has been dominated by Canadian residents. Further references to many of these programmes and centres appear in a number of the following chapters.

One table, explored at some length in the conclusion, is also reproduced here (Table 4) — to facilitate the reading of parts II to VII, in particular. This suggests a progression to have occurred from individualistic activities to contractual projects (normally managed by departments), and thence (third generation) to quite complex networks. The case is not advanced that any one 'generation' is superior — but rather that such an evolutionary process can be detected — with some consequent benefits and some costs.

While it is in Chapter 23 that many of the key issues (to be found in the body of this book) are further explored as a group — and an attempt is made to highlight some of the main challenges and directions that can be anticipated over the coming decade, a brief summary of some of the main findings now follows — to facilitate the digestion of the very varied and often quite detailed review chapters.

TABLE 4
International Partnerships
Three Phases of University Linkages

GENERATION			
	FIRST	SECOND	THIRD
Defining features	Faculty linkage (often informal and individualistic)	Departmental contract (formal)	Network linkage agreement (formal but also flexible)
Problem definition	Shortage of a particular skill, need for 'technical' data or external review	Single disciplinary mindsets limit project	Institutional and policy constraints
Time frame	Annual	Project Life	Indefinite long-term
Spatial scope	Individual university department(s)	University or one/several government department(s)/local community	National or regional
Chief actors	Individual faculty members	Single departments/centres in both countries' universities/governments/corporations/NGOs	Consortia of universities and public/NGO institutions; occasionally private sector
Teaching	Isolated conferences; single course; graduate student(s)	Routine courses and occasional workshops	degree programmes and regular workshops/conferences
Research	Individual faculty or government department interests	Project research agenda	Complex of flexible, inter-connecting research activities
Community Service	Isolated support activities, normally disconnected	Project service to particular institution	A network of capacity-building activities
Management orientation	Very basic logistics management	Project management	Strategic/programme management

For further discussion and origins of this matrix, see Chapter 23.

Some Main Findings

Among the main findings noted (particularly from Parts II to VII) are the following:

- International projects have opened up a large number of opportunities, both for Canadian and overseas participants and institutions. Some have been identified, nurtured and flourished; others have been passed-by because of lack of imagination, lack of commitment, lack of experience and/or lack of resources. It has taken just one or two individuals, in each project, to serve as catalysts for progressive ideas and sometimes, thereby, to make contributions far beyond the formal boundaries of the initial goals of the project;
- Dalhousie University's own institutional memory has proven frail and there is repeated evidence of failure to learn from past experiences, even when these have been recorded and/or colleagues with substantial experience have been in the same department. No tradition of 'learning from experience' has been either fostered or built up;
- When a project leader has sought to develop partnerships beyond the university — to include community groups, public and private sector bodies and NGOs — the overall benefits have probably been more substantial and the project's sustainability appears to have been more secure. In the words of David Williams, a 'thickening of projects' is to be encouraged;
- The extension from individual commitment to a broader institutional project/linkage was often necessary for continuity, but the process has also been fraught with dangers: bureaucratic skills have not readily blended with academic, entrepreneurial or idealistic talents — yet some blending appears necessary for longer-run effectiveness. The bridge from a single project to a broader and longer-term programme network was found to be a critical phase in building sustainability;
- Breadth of vision and recognition of the imperatives of interdisciplinary and cross-cultural connections have characterized the apparently more successful projects and programmes;
- The marriage of research, publications, teaching and community service can be noted in many of the apparently more effective linkages, as can regional dimensions in both Canada and in the partner countries. In drawing this

conclusion, it has to be remarked that the very fact that Dalhousie is a university will both have influenced the kinds of projects it embarked on and the criteria used in assessing effectiveness;

- It has been encouraging to discover how many women have been actively associated with many of the activities (particularly Dalhousie students who have been enabled to study overseas and faculty from overseas who have come to Dalhousie);
- In sad contrast, very few indeed of Canada's own native peoples or minority ethnic groups were found to have participated in any way. French language links were also conspicuously absent;
- A number of themes of vital importance to Third World development have been missing from almost all project and network designs — these include contributions that could be made to disaster prevention and preparedness, to human rights and, in some cases, even to the basic needs of the poorest members of the societies;
- When students have been enabled to play active roles in projects, the overall quality of the work would appear to have benefited, as well as the students' own educational experience. Students have been found to bring a zeal and freshness of approach that more than compensated (when within well-designed frameworks) for lack of experience. It was interesting to note (from The Gambia case) that high school students can also play very useful roles, as well as (from numerous chapters) both graduate and undergraduate level students;
- A few projects appear to have 'ostracized' students, as if they have no roles potentially to play. In such cases, it has to be questioned whether the projects are either being appropriately managed or, alternatively, whether they should continue to be run by a university;
- Links between the projects reviewed have been few and far between — and even then almost exclusively at the level of clerical and accounting procedures;
- Individual and departmental jealousies have served, in the case of many projects, to reduce their effectiveness and sustainability. Indeed some projects have been allowed to terminate because of narrow departmental horizons, when the University as a whole would almost certainly have

continued and expanded them — had the projects not been controlled so tightly by their 'host' departments;

- The overall approaches to 'capacity building' appear to have been characterized (when viewing the projects as a group as distinct from the occasional exceptions) more by amateurishness than routinely guided by professional insights. Little advantage has been taken of opportunities for 'South-South' cooperation between projects (even when administered by the same Dalhousie department); when this has been done, it has proven of considerable value (for examples between Ghana and Zimbabwe, between Indonesia and the Philippines);
- The deliberate build-up of training modules that would provide some transferability both between projects and also within some of Dalhousie's academic programmes (e.g. MES, MDE, MBA) warrants development;
- With but few exceptions (for example, the Indonesian programme), language training in the partner country's language has not been given any emphasis. This would appear a 'lost opportunity' for strengthening cultural awareness;
- Despite considerable student demand, two of the five academic programmes examined (the MES and undergraduate IDS) have been marginalised in the university system; two others (the MDE and international MBA) appear to have integrated reasonably well within their departmental frameworks — but possibly at some expense of the kind of interdisciplinary emphasis that is desirable; the fifth (MMM) is at a very early phase — too early for any 'lessons' to be suggested;
- Theses, field projects and the (exceptional) cases of team-taught, core or 'integrating' classes have proven important mechanisms for enabling students to approach subjects in an interdisciplinary manner (as distinct from the multidisciplinary structure of some of their programmes);
- In overall terms, Dalhousie now has more supporting infrastructure and clearer graduate programme frameworks in place than ten years ago. Nevertheless, the financial situation encountered by the university, as well as the extreme challenges facing many of the countries with which Dalhousie has been working, require renewed efforts to clarify future priorities and to forge strategic partnerships, rather than to fragment and scatter scarce professional and administrative resources yet further.

- Many projects appeared to have been characterized more by individual competitiveness than by any sense of 'university team' commitment. Debates on many of the broader 'world theories' or 'development issues' were not apparently occurring within, or impacting upon, a substantial number of projects being implemented through Dalhousie. Mechanisms for generating far more 'cross-fertilization' between projects and disciplines appear most urgently needed;
- Within the frameworks of a somewhat select few projects and academic programmes, the issues underpinning the Brundtland report on sustainable Development and the Rio Earth Summit are searchingly being explored and communicated between institutions, disciplines and countries. It is clear that Dalhousie is poised at a watershed point in its history of international cooperation. If it can harness energies and resources somewhat more strategically, the university linkages could make a quite substantial contribution to a post-Rio commitment to sustainable development.
- As an outcome of reviews and seminars built around the first edition of *Windows on the World*, but not from any comprehensive study, it would appear that a large number of the findings of this book can be matched by somewhat comparable experiences in many other Canadian universities.

PART I
PARTNERSHIPS IN DEVELOPMENT

"The challenge of finding sustainable development paths ought to provide the impetus — indeed the imperative — for a renewed search for multilateral solutions and a restructured international economic system of co-operation. These challenges cut across the divides of national sovereignty, of limited strategies for economic gain, and of separated disciplines of science.

After a decade and a half of standstill or even deterioration in global co-operation, I believe the time has come for higher expectations, for common goals pursued together, for an increased political will to address our common future".

Gro Harlem Brundtland
Oslo, 20 March 1987

[Cited from the report of the World Commission on Environment and Development, Our Common Future. Oxford: Oxford University Press, 1987, p.x]

1

THE ROAD TO RIO: SETTING THE COMPASS

by Jim MacNeill

The end of the Cold War, the revolution in Eastern Europe and the collapse of the Soviet Union have caused a break with our geopolitical past that is without precedent. The ongoing realignment of Europe, the regional trading blocs forming there, here in North America and elsewhere and the rapid emergence of China, India and Brazil — the giants of the South — are indicative of the quakes yet to come.

The end of the Cold War, the revolution in Eastern Europe and the collapse of the Soviet Union have caused a break with our geopolitical past that is without precedent.

Thanks to the recent quake south of the border, we could well be on the eve of an historic shift in the geopolitics of environmental issues. Vice-President Al Gore has often said that the task of saving the world's environment must and will become the central organizing principle of foreign policy in the post cold-war world. President Clinton echoed the same view recently, when he said: "If we do not find the vision and the leadership to defeat the unprecedented new threats of global climate change, ozone depletion, habitat destruction and desertification, then those threats may well defeat us."

There are even more tremors built into the on-going and world-wide shift in public values, a shift that forced environmental issues to the top of political agendas prior to the current recession — and will almost certainly bring them back to the top after the recovery. Who in 1987 would have predicted that, within a few years, government leader after leader — and the CEO's of perhaps 20 percent of the companies listed in the Fortune 500 — would undergo a public baptism as a born-again environmentalist? Or that sustainable development would become a regular feature of the debates of the UN system, the OECD, and the annual summits of the G7? Or that 125 heads of state and government would gather in Rio for a Summit on the environment?

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These quakes — geopolitical and attitudinal — have been accompanied by another. It is more intellectual in nature but it is nonetheless significant. I am referring to the abrupt change that has occurred in our understanding of the relationships between the environment and the economy. This change is also manifest in the forthcoming change of leadership in Washington. The old guard sees the environment and nature — spotted owls and garter snakes — as the enemy of jobs and the economy. The new guard rejects this thesis. It asserts what the

OECD found in 1984 — that the environment and the economy can be made mutually reinforcing.

In this paper, I will discuss some of these changes. In the process, I will share some reflections about the recent Earth Summit. I spent a lot of time on the Road to Rio and the question I would like us now to consider is: where do we go from here on the Road from Rio? And what are the roles that Canada can play most effectively?

The Road to Rio

It was the largest Summit ever held and potentially the most significant.

Watching the Summit on television, I am sure you were impressed by the scale of the occasion. It was the largest Summit ever held and potentially the most significant. I say *potentially*. Over 125 heads of state and government were there. They adopted some new and *potentially* more sustainable directions for change. They also agreed on a number of broad frameworks for future negotiations. That is the good news. The bad news is that they did not agree to do anything to tackle the sources of the problems that brought them there. They left that to their successors in office and to what, if any, action they can agree to take during the balance of this critical decade. In view of this, it is important that we do not think of Rio not as a unique, one time event. Rather, we should view Rio as a very large and *potentially* important station stop on a journey that has really just begun and has all of the most difficult parts to navigate still ahead of us.

For me, this journey began over three decades ago, when there was no such thing as an environmentalist and when the concept of "environment" provoked the same demand for precise definition that the concept of "sustainable development" does today. A few people, great pioneers like Rachel Carson, Barbara Ward and René Dubos, blazed the first trails. They led us from one intellectual hill to another, then a few mountains, very hard to climb. And, in between, some very deep valleys.

Gradually, with the help of satellite communications — that image of earth from outer space — and innovative thinkers in philosophy and the natural and social sciences — we built one milestone after another.

The first was Stockholm in 1972. It was there, at the first, big United Nations Conference, that we put environment on the global political agenda. We called that milestone "environmental protection" and we placed it at the downstream end of the development cycle — the end of the pipe.

Stockholm secured its place in world history under the expert guidance of that remarkable Canadian, Maurice Strong, who 20 years later organized the Earth Summit. It adopted a landmark Declaration of Principles and an Action Plan which provided both the framework and the standard agenda for the first generation of environmental action. It also established UNEP, the United Nations Environment Program.

Stockholm secured its place in world history under the expert guidance of that remarkable Canadian, Maurice Strong, who 20 years later organized the Earth Summit.

These were remarkable achievements for their time. But, within a decade, it became evident that they were not sufficient. The environmental protection strategies adopted in Stockholm focused largely on the effects of environmental degradation, not on the sources. The richer industrialized countries like Canada were able to clean up a number of sites, rivers and airsheds through expensive end-of-pipe technologies — usually after the damage was done. The poorer countries could not afford it. And while we treated the symptoms of the underlying trends, the sources got steadily worse. The production and consumption patterns of the rich combined with the pervasive poverty and exploding populations of the poor to put pressures on the environment of an intensity never before seen. Country after country experienced a growing scarcity of fundamental ecological capital like water, trees and soil. It became a serious constraint on their development. And, globally, environmental degradation began to threaten the planet's capacity to sustain life as we know it.

The environmental protection strategies adopted in Stockholm focused largely on the effects of environmental degradation, not on the sources.

By 1983, the United Nations General Assembly was convinced that something more fundamental than end-of-pipe "environmental protection" was needed. It called for an independent Commission and asked it to do two things: (1) to take a fresh look at the issues and the strategies we were using to address them, and (2) to come back with some practical recommendations for change and action. In 1987, the Brundtland Commission brought down its report and we added another milestone. We called it "sustainable development"; we anchored it at the upstream end of the development cycle, at the sources of the trends.

In 1987, the Brundtland Commission brought down its report and we added another milestone. We called it "sustainable development"; we anchored it at the upstream end of the development cycle, at the sources of the trends.

It is almost eight years to the month since the 23 members of the Commission sat down together for the first time in Geneva — October 1984. The main question before us then was clear and, during the past eight years, it has become even more urgent. I put it this way: If the world's population is allowed to double over the next 40-50 years — and we are well on the way — can we increase food production by a factor of four, energy use by six, and income by, say, eight (much more evenly distributed, of course), without at the same time pushing the planet beyond certain critical thresholds that we are only now beginning to understand? Or, to put it another way, can growth on the scale needed to meet future needs and aspirations be managed on a basis that is sustainable?

Can growth on the scale needed to meet future needs and aspirations be managed on a basis that is sustainable?

I call that the sustainability question. There are no easy answers to it. The horizon may glow with technological opportunities, but the obstacles to sustainability are not technical. Unfortunately. If they

were, the road to Rio would have been smooth. It was anything but. The obstacles to sustainability are mainly social, institutional and political. And, they were spread about the road to Rio like mines on a battlefield.

Looking ahead five decades, the Commission estimated that a five to ten-fold increase in economic activity would be required to meet the needs and aspirations of a world population twice the size of today's 5 billion. Is that possible? Can we really think in terms of building not one but perhaps two more human worlds on this finite planet?

Many feel confident. They point to the enormous gains in human welfare during this century. If we continue to avoid world-scale conflict, the potential for future gains could be even more awesome. Biotechnology, just one new branch of engineering, could itself change the world as we know it. Information technology already has. We now have potentially unlimited access to information and the advent of global communications makes it possible for people to begin to exercise responsibility for every part of the planet.

Technological optimism has a strong grip on the Western mind and while it provides a sound basis for much hope, it can also feed a lot of denial.

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Technology works both ways. The technologies and processes of development that have produced enormous gains in human welfare are also provoking major unintended changes in the earth's atmosphere, biosphere and hydrosphere. For the first time in all time, the principal engine of global change is one species — our own. Humans have increased the carbon content of the atmosphere by 25 percent over the past 130 years. We are now the major player in the nitrogen cycle, fixing almost as much nitrogen as nature. We now consume nearly 50 percent of the plant matter fixed by photosynthesis. And it shows.

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The Earth Summit was wired into homes everywhere on the planet. Hundreds of millions of people are now aware that much of what God created, humans are now destroying. Not only Earth's basic life-supporting capital of forests, fisheries, species and soils, but also its fresh waters and oceans, and even the ozone shield which protects all life from the sun's more deadly rays. And now, we threaten ourselves with a rapid rise in global temperatures and sea-levels — greater, perhaps, in the next 40-60 years than in the 10,000 years since the last ice age.

We used to believe — and your text books in economics and ecology may still teach — that the world's economic systems and the earth's ecological systems were separate systems and that they impacted on one another only marginally. We now know that, to all intents and purposes, they are one system. They have become totally inter-meshed. Their impact on one another is enormous, it is growing rapidly and it

could soon be decisive in so far as both the environment and the economy are concerned.

The Earth's signals on this are unmistakable. What is global warming, after all? Global warming is simply a form of feedback from the Earth's ecological system to the World's economic system. So is the ozone hole, acid rain in Quebec, soil degradation in Africa, deforestation in British Columbia and species loss in the Amazon. The World's economic systems and Earth's ecological systems are not totally and irreversibly interlocked — till death do them part. To ignore one system today, is to jeopardize the other. That is the new reality of the late 20th century and it may well become the dominant reality of the new millennium.

The World's economic systems and Earth's ecological systems are not totally and irreversibly interlocked.

If the Earth is already crossing certain critical thresholds, how is it going to accommodate a further five- to ten-fold increase in economic activity? No one can predict anything, as Yogi Bera said, especially the future. During my years at OECD, I learned that "he who lives by the crystal ball must learn to eat ground glass."

A five- to ten-fold increase over 50 years sounds enormous, but it actually reflects annual rates of growth of only 3.2 and 4.7 percent. No government aspires to less than that. In many developing countries, it is hardly enough to keep up with projected rates of population growth, let alone reduce levels of poverty.

Still, it translates into a colossal new burden on the environment. Imagine what it means in terms of planetary investment in housing, transport, agriculture, industry and every other part of our economic infrastructure.

Take energy, for example. If nations were to employ current forms of energy development — if it is "business-as-usual" in the energy field — energy supply would have to increase by a factor of 5, just to bring developing countries, with their present populations, up to the level of consumption now prevailing in the industrialized world. Critical life-support systems would collapse long before reaching those levels.

The Brundtland Commission drew three major conclusions. First, we said that Earth cannot accommodate this growth — at least not in ways compatible with the survival of our species — if it continues to rest on certain now-dominant forms of development which degrade the Earth's environment and systematically deplete its basic stocks of ecological capital. Second, we found that the growth in world population — the principal driving force — and in the consumption of certain especially harmful products like fossil fuels — could be slowed down, leveled off and reduced. Third, we pointed out that the policies which now drive unsustainable forms of development can be reversed. What is more, we found that they could be modified in ways that not only encourage more sustainable forms of development but also — at one and the same time

The Brundtland Commission drew three major conclusions.

— improve productivity, industrial efficiency and international competitiveness.

The Australians call that a hat trick. It is difficult but a number of recent official studies in Europe, Japan and here in Canada confirm that it is quite possible. Yes, Virginia, there is a Santa Claus. But, no, Virginia, sustainable development is not a fig-leaf for the status quo. It implies a revolution in the way we do business.

During the past few decades, a new, more efficient and potentially more sustainable economy has already begun to emerge.

The good news is that this revolution is already underway. During the past few decades, a new, more efficient and potentially more sustainable economy has already begun to emerge. It is marked by industries relying more heavily on information and intelligence. They are producing more goods, more jobs and more income while using less energy, less water and other resources for every unit of production. Their economic performance is firmly linked to their environmental performance — and vice versa.

This emerging economy is the result of a complex combination of factors including new technologies and changes in the historic relations between capital, labor, resources and, especially, energy. It is marked by less pollution and resource depletion per unit of output. In fact, the link between them has been broken.

In 1984, OECD, the West's official center of economic thought, proclaimed that the environment and the economy could be made mutually reinforcing! Actually, Japan, Germany, Switzerland and some other countries caught on to this fact during the '70s. Pressed by high world oil prices and by tight emission standards, their leading industries invented most of the industrial technologies of the '90s. Those technologies were not only energy and resource efficient. They were environmentally efficient. And they were internationally competitive. They stole market share in almost every sector — from automobiles to pulp and paper, food processing, the service industries, communications — you name it. They still are gaining market share.

The bad news is that progress is not nearly fast enough.

That is the good news. The bad news is that progress is not nearly fast enough. It is blocked by many things, mainly by misguided public policies and outdated institutional frameworks.

The Commission identified a number of broad directions that development must take if it is to be sustainable and in another book last year, *BEYOND INTERDEPENDENCE*, I carried this analysis further.

We called these directions and the policy changes needed to achieve them "strategic imperatives". They range from policies to reduce high rates of population growth and certain types of consumption, to policies that would increase equity and reduce poverty, re-orient technology, encourage democracy and support human rights.

Let me mention three that are particularly relevant to Canada. First, we need strong policies to encourage a steady annual increase in the efficiency with which we use and consume energy and other resources. Annual increases of 2 to 3 percent are quite realizable, as we discovered during the late '70s and early '80s. This, by the way, is the strategy of choice for reducing greenhouse gas emissions. In addition, it would provide a strong incentive for North American industry to match Japanese and European industry in the design and development of new, environmentally sound technologies. A global market of \$200 billion a year — and growing rapidly — awaits those nations and industries that are most aggressive in developing them.

Second, we need stronger policies to conserve and enhance our stocks of renewable resources. We must learn to live off the interest on our natural capital, without encroaching on the capital itself. To do that, we must change the way we count economic activity — and discount the future. We must also invest massively to build up our declining stocks of natural capital, so we can increase future dividends.

The third imperative, in my view, is the key to all the others. We must put the environment at the center of economic and political decision-making — in the kitchens of our homes, in the board rooms of industry, in the cabinet chambers of government, and in the supreme bodies of the United Nations.

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The main reason for this is to try to ensure that market forces work for both the environment and the economy simultaneously, not one at the expense of the other. The leaders of the old East Bloc nations, of China and some other countries are doing political handstands today to open their economies to market forces. They have finally discovered that the market is the most powerful instrument available for driving development. What they have not yet discovered is that it can drive development in two ways — sustainable and unsustainable. Whether it does one or the other does not depend on an "invisible hand", it depends on man-made policy.

We hear a lot about the market's inability to deal with externalities. It treats the resources of the atmosphere, the oceans and the other commons as "free goods", and it "externalizes" or transfers to the broader community, the costs of air, water, and land pollution, and of resource depletion. We have not learned how to deal with externalities yet, at least not politically.

We hear a lot less about the economic and ecologically destructive effects of deliberate government interventions in the market.

All governments today pay lip service to the market. And then they intervene to distort it in ways that are politically convenient but which usually pre-ordain unsustainable forms of development. OECD governments alone provide perhaps a trillion tax dollars a year in

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subsidies, grants, tax write-offs, sweetheart leases and other kinds of incentives. We have them in energy: over \$40 billion a year for conventional fuels in the U.S. alone; perhaps \$4 billion in Canada for fossil fuels; billions more in Europe and in the countries of the former East-Block, as well as in China, India and most other developing countries. For every dollar of taxpayers' money that Canada's federal government spends to encourage greater energy efficiency, it spends 100 dollars to encourage exploration, production and greater use of fossil fuels — and, incidentally, to encourage more air pollution, acid rain and global warming. The recent decision to sweeten the Hibernia deal by almost a further billion a year makes it worse. The same ratios apply roughly in the United States — and in most other countries.

We have them in agriculture. OECD member governments now spend over \$300 billion a year on agricultural subsidies which encourage overproduction, market gluts, and trade wars. These subsidies are tied to production and they underwrite a fast drawdown of our most basic farm capital — our soils, wood and water, not only here in the North but also in the South where we dump our surpluses and undermine their agriculture. We have them in forestry, water development, industrial development — you name it.

These incentives, almost without exception, tilt the playing field against both the economy and the environment. They are economically perverse, trade distorting and ecologically destructive, all at the same time. We can redeploy them. Energy incentives can be provided in ways that encourage conservation and end-use efficiency, and that discourage fuels that lead to acid rain and global warming. Agricultural incentives can be provided in ways that sustain farm income and encourage farmers to engage in sustainable agricultural practices.

Far from being a drag on the economy, environmentally sustainable development could open a new era of opportunity.

Far from being a drag on the economy, environmentally sustainable development could open a new era of opportunity for innovation and creativity. It would relieve an enormous budget burden and release resources for other purposes. It would make it possible for OECD donor countries to increase resource flows to developing countries and the old East Bloc in ways that enable them to develop their economies on a sustainable basis.

This type of reform is something that free market liberals, fiscal conservatives, budget-balancers, and environmentalists should all be able to agree upon. With it, we could, for example, finally put some resources behind our commitment to facilitate the transfer of environmentally sound technologies to developing countries. We repeated that commitment again in Rio.

Many developing countries like Brazil, China and India, as well as Eastern Europe and the former Soviet Union, are potential gold mines for mutually advantageous deals between industries that own such technologies and those that can use them. I call these deals 'small

bargains' and I provided lots of real-world examples in BEYOND INTERDEPENDENCE. Industry, of course, is not in the business of giving away its intellectual property rights, so any specific transfer may require a broker with access to soft bargains, if they were given a mandate to do so.

The Road from Rio

Earlier, I mentioned two milestones: Stockholm and the Brundtland Commission. What about Rio? Was it a milestone?

Maurice Strong answered this question recently by telling a story stolen from Kissinger's first visit to China and his first meeting with Mao. Kissinger opened the discussion by saying that he admired some of the results of the Chinese revolution. Mao was silent and Kissinger, groping for a follow-up, asked the great man what he thought of the French Revolution. "Well," said Mao, "it's too early to say."

It is too early to assess Rio. It will be a decade, perhaps two, before we know whether Rio had any real impact on the dismal trends. But that has not stopped a rush of early assessments — including my own.

The assessments I have read seem to fall into two groups. The optimists argue that Rio has greatly increased the prospects for action. The pessimists say that Rio was nothing more than a grand, global photo-opportunity for leaders wanting to be seen expressing their good intentions before getting back to business-as-usual.

Personally, I do not think there is much to choose between the two. An optimist, you know, is someone who believes that we live in the best of all possible worlds. A pessimist is someone who fears that the optimist may be right.

Even the pessimists would agree that Rio was a huge political success. It generated enormous publicity and raised the level of public awareness to new highs in the South and East as well the North. It brought forth a new generation of leaders within industry and it marshaled the resources of the business community in an altogether unprecedented way. It added to the momentum to reshape teaching curricula and research programs in many institutes, universities and graduate schools around the world. It signaled the arrival of nongovernmental organizations as a new force in international diplomacy.

Rio also reinforced the shift in agenda from environmental protection to sustainable development begun by the Brundtland Commission. Secretary General Boutros Boutros Ghali put it better than anyone, I think. On the last day of the Conference, he said: "After Rio, it is no longer possible to speak of the environment without putting it in the context of economic and social development."

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Unfortunately, Rio's political success did not translate into substantive gains. Our leaders said all the right things — indeed, they left nothing unsaid — but almost everything undone.

The Earth Summit produced five major agreements. Taken together, they provide us with some new directions and several broad frameworks for future negotiations.

The Earth Summit produced five major agreements, as I am sure you know: the Rio Declaration; Agenda 21, with 40 chapters; a Statement of Principles on forests; and two conventions, one on global warming and one on biodiversity. Taken together, they provide us with some new directions and several broad frameworks for future negotiations. Even that was not easy to achieve. It took enormous dedications and years of diplomatic blood, sweat and tears.

The sad bottom line, however, is that nowhere in these documents will you find a clause, a phrase — or even a bracketed comma — in which governments commit themselves to actually do something to reduce high rates of population growth, alter certain consumption patterns (say in fossil fuels), roll back mass poverty, reduce the debt of poor countries, increase poor country access to rich country markets, reduce emissions of carbon dioxide, reduce rates of deforestation and species loss — or even increase energy efficiency! President Bush and other leaders successfully resisted being pinned down to any targets and timetables in any of the agreements: just broad goals, more monitoring and research, national reports on a voluntary basis, and processes for future negotiations.

In view of this, the Road from Rio will be much longer and more challenging than the Road to Rio. Just about everything that needs to be done remains yet to be agreed and yet to be implemented. And time is shorter. The ozone hole is thinner and every week we lose over 100 species forever, dealing a body blow to evolution.

How do we set the compass on the road from Rio?

I was in Gothenburg recently with Mostafa Tolba, the Executive Director of UNEP and his frustrations were plainly evident. "We don't need any more high sounding declarations," he said, "we need action." The question is: how do we get from here to there, from rhetoric to action? How do we set the compass on the road from Rio? Let me offer a few suggestions, starting with the conventions. Then I will conclude with a few words on the geopolitics of global change.

The Conventions

More than 150 governments signed the climate change and biodiversity conventions in Rio.

More than 150 governments signed the climate change and biodiversity conventions in Rio. Since neither has any teeth, I would expect them to be ratified and brought into effect rather quickly, say two or three years. The U.S., by the way, was the first major country to ratify the climate change convention — a measure of just how toothless it is.

Both conventions need to be strengthened, as many disappointed leaders told the Summit. Europe, Japan and Canada gave up their demand for

targets and timetables in the global warming convention in exchange for a promise by Mr. Bush to attend the Summit — probably the worst bargain in the history of international environmental negotiations. With a new administration in Washington, I believe that we should move immediately to re-instate the targets and timetables, and we can do that in protocols to the conventions.

In Rio, our Environment Minister, Jean Charest, re-confirmed Canada's commitment to stabilize carbon dioxide emissions at 1990 levels by the Year 2000. He did not fudge or hedge on this commitment, as so many other leaders did, and I commend him on that.

If we are serious — and I say if — there are two things we could do. First, we should get our own house in order. We need a domestic program, involving the provinces, which sets out clearly and precisely how we will achieve stabilization by the year 2000 — and then move beyond it. This program will have to include a massive shift in the balance of government spending on energy, from a balance that promotes the use of fossil fuels and global warming to one that promotes energy efficiency. At the moment, as I said earlier, the score is 100 to 1 in favor of global warming and the recent decision to sweeten the Hibernia deal by almost a further billion a year makes it worse. We need to reverse that ratio. We can do so and, at the same time, reduce the nation's deficit and improve our economic performance and international competitiveness. Second, having done that and so secured our credibility abroad, we can take the lead internationally.

If we are serious we should get our own house in order... having done that and so secured our credibility abroad, we can take the lead internationally.

Canada did emerge as a potential leader on the biodiversity convention. There is no doubt that the Prime Minister's decision to part company with George Bush sent shock waves through the conference. Now we can follow up with measures to strengthen the convention, but again, first we have to get our own house in order.

We Canadians control a disproportionate share of the world's geography and we could — I believe we should — become the first nation to achieve the Brundtland Commission's target of protecting 12% of our surface area. The federal government is committed to an early and significant increase in the number of our natural parks and protected areas. But, as Dr. McNeely pointed out, we have to go beyond that. Among other things, we will have to overhaul our perverse incentive systems in agriculture, forestry, fisheries and other areas — incentive systems that today encourage overharvesting and, in the case of forests, efficient overcutting, rather than conservation or, indeed, sustainable management.

If we put our own house in order, we could become a more credible force in international negotiations to strengthen the biodiversity convention and reduce the tragic loss of biodiversity worldwide.

Agenda 21

Agenda 21 includes much of the essential agenda for a transition to more sustainable forms of development.

Agenda 21 includes much of the essential agenda for a transition to more sustainable forms of development. It is not perfect even as an agenda — far from it. Again, governments had no trouble with the broad goals and processes for future discussions, but some of them could not swallow any commitments on items like population and consumption patterns. Even energy efficiency was a no-no to the OPEC countries. And when it came to performance targets and a firm commitment to equitable burden sharing of the costs, many countries, including most OECD countries, simply choked.

Still, the concept for the framework and the process remain intact. And there is a lot in it that can and should be done immediately at the national level.

The Green Plan would be a good place to start.

Maurice Strong has called for the preparation of a national Agenda 21, in effect national strategies for sustainable development. We are in an excellent position to develop one in Canada. We have a National Round Table on Environment and Economy and one in every province. They include key economic ministers, the CEO's of our top corporations, and leaders from environment, academe and other sectors. The National Table reports to the Prime Minister and many of the provincial tables report to their premiers. The Ontario Round Table has just proposed an Ontario Strategy. Manitoba is developing one. I believe that some of the other provinces are as well. But, so far, the Prime Minister has not asked the National Round Table to prepare one. He should do so. The Green Plan would be a good place to start. It is now an environmental protection plan, but it could be broadened to embrace the changes in fiscal, tax, energy, agriculture and other policies, and the institutional changes, needed to encourage a transition to more sustainable forms of development.

Rio agreed that priority should be given to measures to strengthen human and institutional capacity in developing countries.

Rio agreed that priority should be given to measures to strengthen human and institutional capacity in developing countries. According to UNDP, those developing countries that have fared best share one common characteristic; high levels of investment in their people and in their national technological capacity. Apart from relatively stable and honest forms of government — and open markets — it has been proved time and again that education is the number one strategy for development.

Your EMDI program, which is financed by CIDA, is a good example of the sorts of things we can do well. In 1989, the federal and Manitoba governments established the International Institute for Sustainable Development in Winnipeg. Dr. Art Hanson of this university is the new President and measures to strengthen human and institutional capacity are one of its priorities.

Our most recent initiative was taken in Rio when the Prime Minister announced that the IDRC's mandate would be broadened to emphasize sustainable development. IDRC, as you know, is one of Canada's international jewels, with a reputation that is the envy of all others working in the field. With its \$115 million a year budget, no agency is in a better position to quick start Agenda 21, and I have reason to believe that, along with IISD in Winnipeg, it is moving ahead with renewed vigor.

Finance

All of this will require money and the question of who pays was the most difficult and divisive issue on the road to Rio. OECD countries were willing to acknowledge that they had a special responsibility to assist in financing a transition to more sustainable forms of development, but when it came to real numbers and real targets they resisted fiercely.

This may be understandable. The rich have never felt so poor. And the figures are not small. The costs to OECD countries to assist developing countries to fully implement Agenda 21 were estimated at some \$125 billion per year. In order to qualify for this, developing countries would have to find about \$500 billion from their own resources. Now \$125 billion is well in excess of current levels of Official Development Assistance, which are running at some \$55 billion a year. But its very close to what would be available if OECD countries were to meet the old Pearson target of 0.7 percent of GNP.

The costs to OECD countries to assist developing countries to fully implement Agenda 21 were estimated at some \$125 billion per year.

No one expected OECD donors to commit \$125 billion next year. The Brundtland Commission proposed that OECD countries commit themselves to an additional \$12 billion in 1993, rising to \$125 billion a year by 2000. But even that was not on.

The hidden agenda for much of the debate was to find a way out that the media would not interpret as failure. The old Pearson target came to the rescue — again. OECD governments solemnly agreed to meet the target by the year 2000 — "or as soon as possible thereafter." We have a duty to hope that governments are serious, but some of us cannot forget that this same commitment was first made in 1964 and has been repeated far too often since. There really ought to be a statute of limitations on the number of times governments can use the same commitment to get themselves off a political hook.

Some leaders suggested that developing countries might secure some additional money this autumn, through the replenishment of IDA, the soft-loan window of the World Bank. In addition, they endorsed the new Global Environmental Facility — GEF, for short — which is administered by the World Bank in cooperation with UNDP and UNEP — and they agreed to provide it with additional resources.

I am sorry to say that it now looks as though most of them were not serious. Since Rio, away from the glare of the international media, some countries have moved to reduce not increase their overall bilateral assistance budgets. And the recent annual meeting of the World Bank was not promising with most major donors increasingly reluctant to commit new funding to multilateral assistance.

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Unfortunately, this whole debate got off on the wrong foot. The emphasis from the very beginning was on "new and additional" resources for sustainable development, implying that governments can continue to spend "old and traditional" resources — that is, the bulk of their budgets — in the same old way. That may be politically convenient but it dodges the most important issue involved in any transition to sustainable development — that is, how to re-design fiscal and tax policies and how to redeploy existing budgets to provide incentives for sustainable development. The Japanese and a number of European governments started this process in the late '70s, as I mentioned earlier, and they are now at the top of the international league of economic and environmental performers. We in Canada and the United States lag far behind, stuck on the old paradigm of environmental protection. I hope that, with a new generation of leaders in Washington, this may soon begin to change.

The New Geopolitics of Environment

A new generation of leaders in Washington also has the opportunity to break out of old mind sets on issues of national security and foreign policy and both Clinton and Gore have indicated that they are prepared to do so. The tragic spread of regional and ethnic conflicts ensures that conventional threats to security backed by military force will continue to preoccupy them and other leaders. Even here, however, they could move in some new directions. They could lead, for example, in the development of a new system of international guarantees of the security of nations and vulnerable minorities. These guarantees could involve enforcement, including preventive peacekeeping, against some clear cut criteria and under UN auspices.

A new security regime must also address the new threats to the peace and security stemming from mass poverty and environmental breakdown.

A new security regime must also address the new threats to the peace and security stemming from mass poverty and environmental breakdown — and from the desire to gain or protect access to scarce resources. These threats are growing at a frightening pace. A year ago, the oil wars began. The water wars may not be far behind — and then conflicts stemming from the consequences of soil loss, forest loss, higher global temperatures and rising sea levels.

An increasing number of leaders, including now Clinton and Gore, have recognized these new threats but, of course, we do not know when or how they will appear on national security agendas. That will depend on a number of factors, especially the rapidly changing geopolitics of the

issues. The new coalitions and alliances now evolving will play a crucial role in the shape of future negotiations to strengthen the results of Rio, including the conventions and Agenda 21.

Some observers believe that the major geopolitical fault lines of tomorrow's world have already been established. Instead of East/West, they are North/South. Instead of ideological, they are economic. They could well be right. There is no question that Rio was marked by bitter divisions between the rich, the wannabe rich and the poor. The world situation is very fluid, however, and I would hesitate to draw any firm conclusions. I will mention two or three elements that stand out and are of crucial importance to any future negotiations on these issues.

Rio confirmed that the United States, as the world's only military superpower, and as its dominant economy, has been given an effective veto on international environmental policy. There was, of course, a lot of fumbling and bumbling on this in world capitals. At times it seemed that the U.S. itself did not appreciate its own position, or know where it wanted to lead — except that it was not forward. The test of superpower status of course is that you can lead — at least you can force everyone else to follow — in directions that they consider to be sideways or backwards. And that is exactly what the U.S. was allowed to do in Rio.

Take one example, the negotiations on global warming. The European Community supported targets and timetables. So did Japan. Mr. Bush did not. Last April, in New York, he decided to put Europe to the test. To no one's surprise, he found that their infant institutions were not yet strong enough to internalize the conflicting self-interest of their membership, nor to contain the British Government's seemingly visceral determination to maintain its special relationship with the White House. Political institutions that are not backed by a strong sense of solidarity cannot take decisions that may end up hurting certain groups. When push came to shove, Europe as Europe simply did not count. Each country found itself locked into the momentum of its own history and domestic politics and the European Commission was unable to adopt a common European position.

Japan also fumbled the ball in Rio. Some Japanese leaders saw Rio as an easy opportunity to bring its political role in international affairs more in line with its economic power. They raised expectations that Japan would play a leadership role on several issues, and make a comparatively huge contribution to funding the Rio package. Unfortunately, on the very last day of the Summit, those leaders discovered to their horror that they could not deliver their own Prime Minister. He had to remain in Tokyo to fight a more urgent issue in the Diet, the role of the Japanese military in UN peacekeeping operations. The UN Secretary General could have saved the day but he was new and he stumbled badly. In the end, Japanese leaders in Rio saw their expectations fizzle out in embarrassment.

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As for the South, its leverage on the environment is growing.

As for the South, its leverage on the environment is growing. Nations like Brazil, China, India and Indonesia are among the emerging giants of the next century. Their future impact on the global environment is so huge that no international accord on any of the strategic issues like climate change, biodiversity and deforestation can succeed without their full cooperation. They can make or break any agreement and they know it. We saw that in 1990 during the negotiations to strengthen the Montreal Protocol. I would say, however, that judging from Rio, they have not yet learned how to use their leverage on other issues.

As for the old East bloc, the situation is totally confused. In Rio, some of their leaders left the impression that they would like to clean up some of the incredible environmental legacies of the communist system. But that is not their real priority. Their overriding priority is to engineer a massive restructuring of their political and economic systems in the shortest time possible. If they can do that in ways that foster more rather than less sustainable forms of development, they will. If they have to rely on dirty and unsafe technologies — keep their old Chernobyl-type nuclear facilities running, for example — they will do that too. It is clearly in our interest to help them choose the first course but, apart from Germany, we have not been able to rise to the occasion.

Reform of International Institutions

The geopolitical fault lines of the future will have enormous implications for the capacity of an interlocked economic and ecological system to shift from unsustainable to more sustainable patterns of development. We have to watch those fault lines carefully and we also have to try to shape them through better and stronger international institutions.

The United Nations system is the only framework we have for global cooperation on strategic environmental issues.

The United Nations system is the only framework we have for global cooperation on strategic environmental issues. Although the end of the Cold War has given it a new lease on life, it has also revealed its shortcomings. The Brundtland Commission put forward a large number of recommendations for reform and others have since been added to the list. Rio could not accommodate them all — there was not time and, in some cases perhaps, the time was not ripe. But there will be other opportunities to take them up. One in fact, is coming up in 1995 — the 50th anniversary of the UN. It provides a new opportunity to strengthen the system and make it an effective instrument of international governance.

During Rio you heard a lot about one of our recommendations — an Earth Charter. It was taken up and then lost, replaced by the Rio Declaration.

The ground rules and legal norms that we use to guide the relationships on the environment within and between states, and between states and the global commons, have been rapidly outdistanced by the accelerating pace and scale of change. At a minimum, states must accept an obligation to alert and inform their neighbours in the event of an accident likely to have a harmful impact on them — Basel, Chernobyl, Exxon Valdez — as well as an obligation to compensate them for any damage done. They should also accept certain basic norms for prior notification of neighbouring states and prior assessment of activities likely to have a serious impact on them. We need similar norms and obligations for the global commons and future generations. The Brundtland Commission proposed 22 norms of this kind to guide interstate relations during the next century.

The Rio Declaration contains a few norms, but they are often expressed in curious ways that effectively reinforce the status quo. In fact, one principle in the Declaration would give priority to development without the environment, which is how we got into this mess in the first place. Hardly a guideline for the next century.

The Rio Declaration contains a few norms, but they are often expressed in curious ways that effectively reinforce the status quo.

I am pleased to say that Prime Minister Mulroney returned to the Brundtland recommendation in Rio. He proposed a renewed effort to draft a proper Earth Charter, with 1995 as the target date for its completion.

International cooperation to address global threats from the perspective of environmental protection remains highly inadequate. And international cooperation to address them from the perspective of sustainable development has hardly started. Rio's principal recommendation for institutional reform involves the establishment of a new Commission on Sustainable Development. It could become the primary forum for international leadership, North-South dialogue and action on the Road from Rio. If that is to happen, the General Assembly will have to establish it as a high-level ministerial body with a strong secretariat, and give it a clear mandate to monitor the implementation of Agenda 21 and build the Road from Rio stone by stone. Regrettably, the signs in New York at the moment are not good.

International cooperation to address global threats from the perspective of environmental protection remains highly inadequate.

There are many obstacles ahead, but none are as high as our outdated notions of national sovereignty. Over a decade ago, Daniel Bell observed that "the nation state is becoming too small for the big problems of life and too big for the small problems" That is even more true today.

There are many obstacles ahead, but none are as high as our outdated notions of national sovereignty.

The Hague Declaration of 1988, which has been signed by 30 nations to date, including Canada, points in the direction that nations must go if we are to achieve any effective control over our common future. It calls for a new international authority with responsibility to prevent further global warming. It accepts that certain decisions will have to be

made by vote rather than consensus. And it accepts measures to enforce compliance, with appeals against such measures being placed before the International Court of Justice.

A number of other proposals have been advanced to strengthen the supreme bodies of the United Nations. It has been proposed, for example, that the Security Council should periodically devote a special session to environmental threats to peace and security. Mr. Schevardnadze, when he was still foreign minister, proposed a new Council, parallel to the Security Council but without the right of veto.

Changes like this will not be easy to achieve. As Joe E. Lewis used to say: "You can lead a horse to water, but if you can get him to roll over and float on his back, you have really accomplished something." It will take a tremendous effort, but there are some signs that the time is ripe to begin to prod the beast to roll over. The Secretary General has promised a range of proposals to reform the system and I hope he is guided by some of these suggestions. They reflect the level of ambition that needs to be applied if we are going to develop the forms of governance needed to guide the planet through the next most turbulent decades.

We may be living through one of those rare "hinges of history", with unprecedented opportunities for policy and institutional innovation.

Universities could be the catalysts needed to develop new approaches to specific issues like deforestation and biological diversity; to think through how best to make the market work for sustainable development; to support the new institutional capacity needed to guide public policy, especially in developing countries; and to adapt domestic and international institutional structures to promote more sustainable forms of development.

We may be living through one of those rare "hinges of history", with unprecedented opportunities for policy and institutional innovation. The challenges are so enormous that a global effort of unprecedented proportions will have to be mounted on the Road from Rio. Universities could be the catalysts needed to develop new approaches to specific issues like deforestation and biological diversity; to think through how best to make the market work for sustainable development; to support the new institutional capacity needed to guide public policy, especially in developing countries; and to adapt domestic and international institutional structures to promote more sustainable forms of development.

The exciting journey that we began in the '60s will continue. The forces which are shaping the future of our planet today are more than ever the product of human activity and subject to human control. We are literally in command of our own future on this planet and whether we succeed or fail, the decisions and the responsibility will have been ours.

2

SOME PERSPECTIVES ON THE CHALLENGES TO THE INTERNATIONAL COMMUNITY OF UNIVERSITIES AFTER RIO

by Alexander A. Kwapong

We need no reminder how dramatic, sudden and, in some sense, unpredictable the transformation of the international world has been during the last two to three years. The brief euphoria following the end of the Cold War, with the collapse of Communism in Eastern and Central Europe, the dissolution of the former Soviet Union and the Gulf War, which seemed to herald a New World Order has given way to a more sober reality. The end of the hegemony of the two super powers has not brought any "peace dividend". We see, instead, a deepening world economic recession, ethnic, racial and religious conflicts, civil wars, social upheavals and turmoil within regions and among nations all around the world, in places like Bosnia Hercegovina, Somalia, Sudan, Angola and Afghanistan. Even developed nations like The United States (Los Angeles), Canada (Oka), Germany and France are not immune to these social, political and racial disturbances. These and many other trouble spots continue to remind us of the need for greater efforts on the part of the international community to overcome the injustices and prejudices of the past, resolve the global problems that threaten our world and to help build a more just and lasting peace.

The end of the hegemony of the two super powers has not brought any "peace dividend".

These issues clearly provide the framework within which we should look at the international dimension of our theme. Over and above these conflicts, I would like to draw attention to the two over-riding issues which will continue to dominate the global development agenda for the 1990s and to which the universities of the world should accord the highest priority. These are global poverty and the global environmental crisis.

The two over-riding issues to which the universities of the world should accord the highest priority are global poverty and the global environmental crisis.

Poverty in the world and the persistent, growing gap between the rich nations of the North and the poor ones of the South in an increasingly interdependent world whose interdependence is so asymmetrical, will be one of the crucial priorities for the governments and peoples, no less than for the universities of the North and South.

Global poverty, as we know, was addressed in numerous international studies and strategies in the 60's and 70's. Academic programmes of teaching and research were heavily influenced by such major UN reports

as those of the Lester Pearson, Willy Brandt and Olof Palme Commissions. As we weigh the successes and failures achieved by such strategies as the basic needs approach, growth with equity, the Law of the Sea Convention, the Global Commons, and the various UN Development Decades etc., those of us who have been practically involved in these international development efforts are acutely aware of the serious set-backs of the 1980's and the retreat from multilateralism experienced by the UN and various international agencies which, happily, is of late apparently beginning to take a turn for the better.

Universities as institutions, we must admit, played an indirect and only peripheral role in the international efforts to implement the findings of these Commissions. Recent major studies such as the World Bank's World Development Report of 1990, devoted to poverty, UNDP's reports on Human Development and UNICEF's on the State of the World's Children and World Summit on Children, all exemplify the renewed focus on poverty and on the fundamental relationship between economic growth and human development.

The other major priority on the global development agenda is the global environmental crisis for which sustainable development has emerged as the essential response. Sustainable development, brought into prominence by the Brundtland Commission, has been called various things — a fashionable metaphor, a buzzword which defies precise definition. It was the great merit of the Brundtland Commission — the UN World Commission on Environment and Development — that by firmly making the necessary **and** political connection between the global environmental crisis in all its aspects and the world poverty crisis, and the crisis of global equity, and by showing clearly that poverty is among the worst of pollutions, it succeeded in putting sustainable development firmly on the political as well as academic agenda of many industrialized and developing nations.

To resolve the dilemma posed by the asymmetry of global interdependence, it is obvious that the global and environmental challenge which occupies centre stage in the industrialized countries must be effectively interfaced with the international economic crisis with which the poor nations of the world are preoccupied so as to produce sustainability and equity in world development. Brundtland puts the matter succinctly: *"Two conditions must be met before international economic exchanges can become beneficial for all concerned. The sustainability of ecosystems on which the global economy depends must be guaranteed. And the economic partners must be satisfied that the basis of the exchange is equitable; relationships that are unequal and based on dominance of one kind or another are not a sound or durable basis of interdependence."* (WCED, p. 67)

It took the world only five short years to move from Brundtland to the Earth Summit in Rio.

Earth Summit in Rio. As Arthur Hanson has well put it, within "five short years, sustainable development has moved from the margins of political consideration to being a central objective of the world's

leaders". Major actors on the world scene now fully accept this agenda. Appealing to the international community not to turn its back on the poor of the world, World Bank President, Lewis Preston, in his address to the World Bank Annual Meetings in Washington, D.C. on September 22, 1992, had this to say: *"There is no more important task facing humanity than poverty reduction and sustainable development. The most urgent environmental problems are those that cause illness and death on a huge scale in the developing world - dirty water, inadequate sanitation and pollution. In the global environmental debates, not enough attention has been given to these issues. Ours must be a people-first environmentalism."* (World Bank News, September 25, 1992, pages 1, 7)

There is no more important task facing humanity than poverty reduction and sustainable development.

In place of the bipolar world to which the nations of the world became accustomed during the last four decades, we see now emerging three major economic and trading blocs: the North American Free Trade Area of Canada, U.S.A. and Mexico; the European Community; and the economic power house of the Pacific Rim countries led by Japan; and outside of these charmed circles of powerful economic blocs, the other nations of Asia, Africa, the Middle East and Latin America which form the bulk of the old G77 nations. Yet all is not neat and tidy within these emerging economic super-groups and the road to greater regional, political and economic unity as we have seen recently is strewn with many obstacles. The challenge of a world which is globally interdependent, linked together by instantaneous telecommunications and information technologies, side-by-side with regional groups and nations subject to the old traditional animosities, ethnic, political and racial conflicts that we have noted above will call for radical and proactive responses not only from governments, the private sector and non-governmental organizations, but also from the international university community whose responses must above all be intellectual and moral. The essence of this challenge to the university community in both North and South is how to redefine the mission and the idea of the university for the 21st Century and how to respond in specific, practical and operational terms at the domestic and international levels to the two urgent priorities of the global agenda.

The essence of this challenge to the university community in both North and South is how to redefine the mission and the idea of the university for the 21st Century and how to respond in specific, practical and operational terms at the domestic and international levels to the two urgent priorities of the global agenda.

The Rio Earth Summit, which brought together 100 Heads of State from 180 countries, 30,000 delegates and 9,000 journalists, was, despite its obvious disappointments, a triumph for mankind in placing sustainable development at the very top of the global agenda for the 21st Century. The Rio Declaration of Sustainable Development Principles, the action plan for Agenda 21, the conventions on climatic change and bio-diversity and principles on an agreement for a forestry and desertification convention, though modest, are all achievements of far-reaching significance. One of the principal challenges before the university community in both the North and South lies in their contribution to the practical implementation of Agenda 21 of the Earth Summit for whose implementation in their countries, the G77 poor nations of the South have pledged their readiness to fund 80% of the

costs if the wealthy nations of the North will fund the 20%. Is the North willing to do so? Recent actions by a number of industrialized nations in cutting back on their commitment and assistance to poorer nations would seem to belie the more optimistic scenario generated at Rio.

Sustainable development, both as a concept and as a practical strategy, requires the total commitment of governments, the private sector, inter-governmental and non-governmental agencies, and not least of all, the international university community.

The International Association of Universities (IAU) collaborated with the UN University and Dalhousie University in organizing a major conference on University Action for Sustainable Development in December 1991. This played a creditable role in the preparations leading to the Rio Summit and in the participation in the Summit. The Lester Pearson Institute publication "Creating a Common Future", as well as the Strategic Action Plan and Recommendations for follow-up, which came out of the Dalhousie Conference, do provide an important blueprint for the strategic role that international higher education must play in the attainment of sustainable development in the world and mark a significant milestone in the path opening up before the world's university community in the coming decades.

If the universities in both the developing and the developed nations take the implications of the Rio Summit in all seriousness, the implementation of Agenda 21 will have radical and systemic consequences.

If the universities in both the developing and the developed nations take the implications of the Rio Summit in all seriousness, the implementation of Agenda 21 will have radical and systemic consequences, both disciplinary and financial, upon these universities, on their internal structures, organization, administration and management of curricula, teaching and research programmes, as well as exchange and international linkage projects and activities within their departments, faculties and schools across their various campuses. The question is: are the universities prepared to undergo this systemic transformation? I shall return to this later.

Another imperative of the need for the universities to make the transformation called for by the Rio Summit Agenda is signaled by the World Declaration on Education for All which was issued by the Jomtien Conference in Thailand in 1990. Jomtien poses a profound challenge to the universities of the world because of its far-reaching implications for all sectors of education in both the developed and developing countries as we approach the 21st Century. As you would recall, in the Preamble to the Declaration which the Jomtien Conference issued, we are reminded of the following stark statistics of the state of education around the world in the 1990s, despite the notable efforts by countries around the world to ensure the right to education for all enshrined within the Universal Declaration of Human Rights forty years ago:

"More than 100 million children, including at least 60 million girls, have no access to primary schooling; more than 960 million adults, two-thirds of whom are women, are illiterate and functional illiteracy is a significant problem in all countries, industrialized and developing; more than one-third of the world's adults have no access to the printed knowledge, new skills and technologies that could improve the quality of their lives and help them shape, adapt to, social and cultural change; and more than 100 million children and countless adults fail to complete basic education programmes; millions more satisfy their attendance requirements but do not acquire essential knowledge and skill".

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The Declaration then contrasts these grim statistics with the daunting problem that the world faces: *"notably mounting debt burdens, the threat of economic stagnation and decline, rapid population growth, widening economic disparities among and within nations, war, occupation, civil strife, violent crime, the preventable deaths of millions of children and widespread environmental degradation. These problems constrain efforts to meet basic learning needs, while the lack of basic education among a significant proportion of the population prevents societies from addressing such problems with strength and purpose".*

This major crisis of education, which itself is a reflection of the world development crisis, has led to major set-backs in the 1980s in basic education in many of the least developed countries; and even in certain industrialized countries, too, there have been cutbacks in government expenditure over the 1980s that have led to the deterioration of education.

To provide basic education for all children, youth and adults and give them an opportunity to achieve and maintain an acceptable level of learning, the Declaration observes that it is essential to mobilize existing and new financial and human resources, public, private and voluntary, through a much broader scope of action than the past. *"All of society has a contribution to make recognizing that, time, energy and funding directed to basic education are perhaps the most profound investments in people and in the future of a country which can be made". "Above all," the Declaration concludes, "special protection for basic education will be required in countries undergoing structural adjustment and facing severe external debt burdens. Today, more than ever, education must be seen as a fundamental dimension of any social, cultural, and economic design".*

"All of society has a contribution to make recognizing that, time, energy and funding directed to basic education are perhaps the most profound investments in people and in the future of a country which can be made".

In seeking to translate into action the framework for action adopted by the Jomtien Conference, many governments have sought to reallocate scarce resources, not only between sectors but also within sectors, especially from the tertiary to the primary or basic education sector. Faced with this challenge of reduced resources and increased pressures for universal access, it is clear that universities will especially continue

to feel more pressure on how to make less do more. And this applies not only to universities in the developing countries, especially Africa, but also in several of the industrialized countries. The challenge of adapting themselves to the constraints of the present in order to meet effectively the challenges of the future underlies the major tasks before the university community.

For Africa, the decade of the 1980s has truly been the "lost decade".

It will be useful to illustrate these issues by turning to the educational crisis in Africa and, within it, the crisis of the universities and higher education institutions on the continent. African nations as we know have been beset by a deep seated multi-faceted crisis of development in which so many of the gains and progress made after the attainment of independence have been lost. For Africa, the decade of the 1980s has truly been the "lost decade". Since the middle of the last decade, several African countries, some 33 of them, have shown increasing determination to implement wide-ranging structural adjustment programmes and reforms of their economies, reforms which, it is generally accepted, are imperative and unavoidable. We are not here concerned with the principle of adjustment itself or the fundamental objectives of the economic reforms but with the nature of adjustment and its particular instruments, especially economic and political conditionalities and their social impact on vulnerable groups like children, women and the poor. It will appear now that these concerns are giving way to increasing concerns for good governance and the basic elements of democracy; accountability of governments and the critical right to dissent; a free press and open debate; meritocracy in the civil service; an independent judiciary; institutional pluralism and popular participation. There is agreement that economic reforms must go hand-in-hand with political reforms and it is now accepted that better governance requires openness and accountability, transparency and predictability; high quality technical, analytical, management and institutional capacities; and the necessary skilled manpower and human resources. The success of the economic and social reforms depends on the appropriate enabling environment provided by good governance which in turn requires the ability to manage change and to respond to domestic and external shocks and challenges at all levels of society, at the macro as well as the sector levels. Such policy responses must be "designed, implemented and owned" by the Africans themselves. That is why a central priority of the reform programmes is now seen as capacity building which is a critical constituent of good governance. Capacity building has been recognized as the "missing link" in past African development efforts and it is now accepted that building such human and institutional capacities and utilizing them effectively is the central challenge of African development efforts to which the African governments and people must give the highest priority. That is one of the principal lessons to be drawn from the successes and failures of 30 years of African independence. The principal issue is to build these capacities through institutional reforms at all levels of government, the private sector and non-governmental organizations, including measures in all three sectors to empower women to play their full-role in

The success of the economic and social reforms depends on the appropriate enabling environment provided by good governance .

economic and social development. And African nations must invest more in the human capital and institutions and make the best possible use of these. The African Capacity Building Foundation recently established by the African Development Bank, UNDP and the World Bank with its headquarters in Harare, Zimbabwe, is an excellent and promising initiative to spearhead African capacity building in policy analysis and development management.

The educational systems of Sub-Saharan Africa in all sectors have suffered perhaps the most in this development crisis. In no area are the effects of the economic and social collapse so evident as in education as a whole and the universities and scientific research institutions in particular. All segments of education — primary, secondary and tertiary — are suffering from the serious decline in quality due to the acute shortage of financial and physical resources such as classrooms, laboratories, libraries and basic inputs like books, journals, chemicals and other learning materials. But the greatest shortage, at all levels, is of teachers, researchers and managers. In the face of these severe human resource constraints and the growing demands of the burgeoning population for wider access to all levels of education, overhauling and revitalizing the education sector as a whole is being given high priority in many of the reform programmes. The revival of education is seen as central to capacity building. Many governments have accepted this as the principal challenge and are seeking to rehabilitate all sectors of the educational system so as to reduce unit costs, generate financial resources, revitalize infrastructure, and ensure cost-effective management of limited resources so as to provide greater and more equitable access to the growing numbers of pupils and students seeking entry into educational institutions. Hard choices have to be made and priorities have to be re-ordered.

The revival of education is seen as central to capacity building.

The challenge of providing high quality teaching, research and service which are the traditional responsibilities of universities, has now been severely intensified by the strong demographic pressures for access to higher education at the time of acute financial constraints. As these pressures continue to build-up for universal access, the universities in the developing countries can neither ignore nor remain indifferent to the irresistible demands for basic education for all. It is clear that the traditional resources, methods and attitudes of university teaching and face-to-face instruction cannot cope with this overwhelming demand for access and the need to be competitive and to achieve efficiency and high quality.

As pressures continue to build-up for universal access, the universities in the developing countries can neither ignore nor remain indifferent to the irresistible demands for basic education for all.

Large numbers of students from the South who are basically qualified but cannot find places within the universities in their own countries and who are able to do so are accordingly migrating, in the first instance, from country to country within their own regions where conditions of life are favourable and opportunities exist for university education. And many more are going further afield to the more affluent industrialized countries. Inevitably as we have seen in the moves to establish

regional groupings, many barriers have been and continue to be put up in the industrialized nations restricting immigration by foreign Third World students to these countries in the form of high fees for foreign students and strict border and immigration controls. Where you have civil wars and political upheavals, such students form part of the flood of political refugees and asylum seekers. But the paradox is that at the time when the regional groups such as the European Community have been working out imaginative ways for promoting intra-group or regional student mobility and exchanges such as Erasmus, Tempus, Copernicus, Trace and many other innovative exchange and accreditation schemes, at the same time the barriers have been going up to prevent so-called "economic migrants" from the developing countries from entering these regions. Sub-Saharan African nations in particular have been very hard hit by the post-Cold War, political and economic changes in Eastern Europe and the Soviet Union which have closed off useful alternative sources for higher education. This makes it all the more imperative for their own countries to provide them at home with the higher education they cannot find abroad. The crisis in education which compels these African and other Third World student economic migrants to seek their fortunes abroad is of course one aspect of the same global development crisis which has been the concern of Jomtien and the Rio Summit.

The very nature of the constituency of contemporary universities, within both the developed and developing countries, has been undergoing a structural transformation due to external factors which many universities are yet to accept.

At the same time, the very nature of the constituency of contemporary universities, within both the developed and developing countries, has been undergoing a structural transformation due to external factors which many universities are yet to accept. For one thing, the student body in many western countries is now vastly different from what it used to be as the following description by Millard of the situation in the United States indicates: "Of the twelve and a half million students enrolled today, fewer than two million are 'traditional college students', that is eighteen to twenty-two year-old full-time campus residents. More than half the students are over twenty-two years of age; 40% are over twenty-five, there are more students over thirty-five than there are eighteen year-olds in college; two fifths are enrolled part-time; and considerably more than a third live off campus. By the year 2000, the adult part-time students is likely to be the new majority, yet most institutions still tend to operate and be structured on the assumption that the traditional student is the norm." (Richard M. Millard: "Today's Myths and Tomorrow's Realities, Jossey-Bass, October 1991, pp. 3-4) In British Columbia, Canada, as A.W. Bates, Executive Director of the Open Learning Agency, also points out, already 44% of all British Columbia higher education students are part-time and by the year 2000, full-time students will be in the minority. (ABC's for a New Generation in the Vancouver Sun, Friday, October 9, 1992, Op/Ed page) The trend in other industrialized countries is not far behind the same pattern. In the developing countries, however, the total percentage of young students gaining access to the universities, as we have seen, is so much more limited. Yet the long term trends will also surely follow a similar pattern.

The modern university, as we are aware, has become a very complex organization. Recent students of modern organizational culture have identified in the modern university an admixture of four models: bureaucratic, collegial, political and anarchic. The traditional university education dating from the Middle Ages centred on the campus with academic faculty collegiality as the centre-piece, with scheduled traditional face-to-face classes, lectures in set lecture rooms and laboratories, is now giving way to a structural shift in which increasing numbers of universities are teaching adult students off-campus in industrial locations by different time-tables at a distance. As Marion Croft of Laurentian University and President of the International Council for Distance Education (ICDE), in a paper presented to a Symposium on Reforms in Higher Education in New Delhi in August 1992, with particular reference to distance education, jointly sponsored by The Commonwealth of Learning and the University Grants Commission of India (to which I am specially indebted for these remarks on distance education and open learning) has well described it, the extended campus "*has become a community of teachers and learners wherever they may be...*". If this shift is real, then one of the fundamental differences between distance education and the traditional university may be solved by time and expediency. "*The instructors' freedom to develop and present subject matter touches on two of the concepts fundamental to both instructional and research integrity, academic freedom and the authority derived from expertise in the field. Much of distance education is in direct conflict with the autonomy of the instructor. Distance education changes the nature of the classroom in a manner which may seem to undermine the teacher's central role and authority in the instructional process and limit his or her freedom.... Instead of being the professor, an instructor in a distance course becomes a facilitator and the dynamics of the course of the teacher-student relationship change. Distance education therefore raises new questions on the very process of teaching and learning.*" (M. Croft *ibid*)

Distance education and open learning have gradually, over the past twenty years, as we know, with the creation of the open universities, especially the U.K. Open University, gained credibility and established themselves firmly in the world of higher education as the wave of the future. But there are still technical, structural and attitudinal obstacles to the use of the new technologies which traditional universities have to overcome. The technical obstacles concern the quality of the technology itself. The structural obstacles concern regulations and policies of the institutions or governments; but it is the attitudinal obstacles on the part of the students, faculties and administrators which are the most difficult to overcome and which concern the fear of change, fear of 'technically complex devices', concerns about job security and resistance to learning new things. For the developing countries of Asia, Latin America and Africa, unquestionably, distance and open learning universities offer tremendous possibilities for meeting the tremendous demographic pressure for access in the face of severe financial and human resource constraints. The Allama Iqbal Open

The traditional university education dating from the Middle Ages centred on the campus with academic faculty collegiality as the centre-piece.

Distance education and open learning have gradually gained credibility and established themselves firmly in the world of higher education as the wave of the future.

University of Pakistan which is providing quality university education for over 100,000 students who constitute 50% of the total university population in Pakistan, the Indira Gandhi National Open University (IGNOU) and the other four Open Universities in India now cater to over 200,000 students; and several others in Asia and elsewhere in the Third World provide an ample demonstration of the great potential that distance education and open learning offers to the developing countries. Africa has yet to establish a major open university. Tanzania is about to inaugurate its Open University.

The transformation of universities from conventional, face-to-face single-mode to dual or mixed mode institutions in order to benefit from the vast potential offered by modern communications technologies such as computer teleconferencing, desk-top publishing and other forms of educational technology therefore constitutes one of the central challenges that universities must address. This was the subject of a symposium COL convened for heads of the university grants committees in New Delhi last August 1992. It is no longer a matter of choice whether in seeking to meet the global challenges, that I have already discussed, presented by sustainable development and global poverty and the world crisis in education, the universities can afford to be indifferent to these new learning and knowledge imperatives and techniques.

The first country that harnesses modern communications technology will become the economic leader of the 21st century.

Bates sums up the challenge of information technology succinctly: *"the first country that harnesses modern communications technology will become the economic leader of the 21st century. Access to and the management of information are critical skills for both individuals and the work force in general". (Bates, ibid)*

To manage therefore these complex on-campus, off-campus teaching and research responsibilities, there will be a need for a new type of management capacity in the universities in the developing countries no less than in the industrialized ones, a management capacity that can combine technical and analytical competence with value-driven leadership of the highest order that can move the universities forward into totally new and innovative directions. For such leadership, the ability to provide an overall vision, to establish the necessary management and administrative structures, design strategic planning units, introduce new approaches that will reward teaching as much as research, mobilize the support and cooperation of professional academic colleagues and inspire the university as a whole to transform itself in order to meet these global and domestic and technological challenges that I have been discussing: that is the crux of the international dimension.

It will not be easy; some will in fact argue that the qualities required for such leadership are those of super human beings. But at least it is evident that they are objectives to which universities, both individually and collectively, must aspire and to which they must seriously address

themselves if they are to make the transition into the 21st century as the key agents of intellectual change and development. The role of the world university community then becomes crucial in the efforts to meet this challenge, and its agenda and methodology must be radically different from what it has hitherto been. There is no question that one of the principal issues which universities as a whole must endeavour to deal with is the question of financial and material resources, which brings me back to the question of global poverty.

There is no question that one of the principal issues which universities as a whole must endeavour to deal with is the question of financial and material resources

It will require, as we have seen in the case of Rio and Jomtien, a massive transfer and commitment of resources to fulfill the global agenda. These massive funds will only come if they are linked to changing the traditional system. The bulk of these resources must of course be found by national governments, regional organizations and international inter-governmental agencies, bilateral as well as multilateral. The role of the United Nations and its agencies like the UN University will be crucial. But as again both Rio and Jomtien have demonstrated, non-governmental organizations including organizations like the International Association of Universities (IAU) and national associations in the North like the Association of Universities and Colleges of Canada (AUCC) have a vital role to play in moving the world forward on the road from Jomtien and Rio. Both in the national delegations which attended Rio as well as collectively at the Global Forum, there was an up-welling of popular participation and determination by the non-governmental organizations which made all the difference. By exerting intense diplomatic pressures on government leaders, they brought the Summit to the admittedly limited but potentially far-reaching outcome that we have already discussed. In the long run, the greatest role that the associations I have mentioned can play in these altered times is to promote, above all, the transformation and internationalization of the world's universities as they adapt themselves to the new domestic/global demands.

A number of great research universities in several parts of the world, especially in North America, have of late begun to call for radical reforms and "bold experimentation" in the 90s that will transform the ability of universities to meet the needs of the 21st century. This call for a new "paradigm", comparable to the great university reforms that took place in North America at the end of the 19th century should be strongly echoed elsewhere, especially in the developing nations, and, from my point of view, not least in Africa. One of the important goals of this new paradigm is to internationalize all university programmes. In a sense by the very circumstances of their creation and exigencies of their very existence, universities in Africa and several other developing countries are willy-nilly obliged to think international. In the developed countries, several institutions which have "international linkage programmes" usually treat these projects as peripheral activities, usually sustained by a few dedicated scholars with special interests and not fully integrated into the total academic system of the institution.

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As the Talloires Declaration issued recently by a conference convened by Tufts University has clearly demonstrated, it is possible, given the appropriate leadership for many universities, to accept the basic challenges required in transforming themselves into effective instruments for meeting the environmental and development challenges which constitute the agendas of Rio and Jomtien. But the university community in both North and South will have to go beyond the traditional mechanisms and "business as usual" and find innovative ways of becoming agents of change, of engaging directly with national governments, and the major international inter-governmental agencies and non-governmental organizations in dialogue and collaborative activities designed to effect the transformation of their constituents so as to meet the specific challenges of world poverty, the threats to the global environment, and the demands for a share in the knowledge and skills of the new technologies and sciences, on the basis of equity and justice in the world.

*Universities in countries
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ment in the world.*

I would like to conclude by referring to the editorial which appeared in the *Globe and Mail* of March 12, 1993, dealing with the recent decision by the Canadian Government to cut its foreign aid by \$4.4 billion to the poor countries of the Third World in Asia and Africa, including seven in eastern and central Africa, and to redirect its aid to the countries of the former Soviet Union and East and Central Europe. Unhappily Canada is not the only country or the worst of the countries in the developed world making such cuts. However, in the light of the strong commitment to the alleviation of global poverty and the great generosity that Canada has until recently demonstrated in its aid policies, and in particular the strong leadership that Canada showed at the Rio Summit, it does not require much imagination to see that the road from Rio will be hard and particularly rocky for the poorer nations of the South. If there is a consolation, it is that the challenges of sustainable development are global in their impact and affect the North no less than the South. The global environmental challenges posed by high population growth rates in the South, the destruction of tropical forests, desertification, the increasing pollution of the world's atmosphere, oceans and rivers and the destruction of the "ozone layer" will all, in the long term, affect the rich countries no less adversely than the poor ones of the South. The imperatives for genuine global caring are thus the concerns of the global community embracing the South as well as the North. Universities in Canada and other developed nations have therefore a cardinal responsibility, not only to promote the objectives of Rio and Jomtien through their teaching and research, but also to serve as advocates for the kinds of generous external aid policies that are necessary underpinnings for a more equitable and sustainable world.

It is of course a matter of making hard choices in these difficult times as the Globe and Mail editorial reminds us. The paper asks, concluding its plea for a more generous policy, "*Why does Ottawa decide to spend hundreds of millions of dollars to drill for economic oil of Newfoundland whilst slashing its aid budget? Why does it decide to buy new military helicopters so expensive that the cost of three of them would cover Canada's whole aid budget to Africa? For Canada's aid recipients, these are questions of life and death. For Canadians, these are questions of conscience.*"

3

INTERNATIONALIZING THE UNIVERSITY COMMUNITY IN CANADA⁽¹⁾

by John W. Berry

"The new electronic interdependence re-creates
the world in the image of a global village"

Marshall McLuhan⁽²⁾

Introduction

"Internationalization" and "Globalization" have become familiar words in the 1990's. Nowhere is this more so than in education (with the possible exception of international business and trade). They crop up again and again in the discourse of senior administrators of our universities; numerous meetings and conferences are held on the subject. The context, however, is usually that of something which is happening elsewhere, which may have some impact on the university, or to which the university ought to respond in this or that specific way.

This paper argues, to the contrary, that internationalization is fundamentally changing the environment in which the university's central mandate of teaching, research and service is implemented. This presents a challenge without recent precedent to universities — both as individual institutions and as a community. Unless they undergo a sweeping re-orientation at every level: department, faculty and institution, universities risk becoming increasingly irrelevant as the pace of global change accelerates.

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We live in a changing world. This has been a cliché for years, but recent events have surely driven home its truth as never before. Without going into details, and at the risk of sounding rather like a course syllabus, let me list a number of recent developments and trends — moving from very broad events on the world stage to those more specific to Canada. Every one of these, I submit, is already having a major impact on our universities.

Changes in Political Structures and Alignments

- "Europe without borders". Notwithstanding recent setbacks related to ratification of the Maastricht treaty, at the operational level the move toward integration continues. It has major implications for the movement of peoples, including students and scholars and is already changing the composition and complexion of universities in the European Community.
- The collapse of Soviet hegemony and the related end of the Cold War. This has triggered a whole series of events: the wholesale movement of peoples, local or regional destabilization (e.g. in the Balkans), decentralization of control and authority in all sectors (including education and universities), the urgent challenge of developing new management mechanisms and training a whole generation of administrators, the opening up of the former Soviet block to world capital markets (thus greatly increasing demand for investment capital when the recession has dried up the supply), the emergence of a wide variety of new trade and investment opportunities, as well as new requests for assistance.
- Nationalism and the fragmentation of large states. Examples abound of movements by ethnic or linguistic groups to establish a national state. Paradoxically, both the integrating, globalizing trends, and the capacity for small groups to organize themselves effectively as distinct entities seeking greater independence, are driven by the same technologies.
- Decline of interest in the North — South Agenda. Increasingly, as the G7 and others shift their attention to East & Central Europe, or to regional interests such as the North American Free Trade Agreement (NAFTA), traditional development issues, particularly regarding Africa, are being de-emphasized. Arguably these should all be seen as complementary rather than competing priorities, but it is difficult to escape the conclusion that in a period of scarce resources, increased involvement in one area implies a reduction of attention somewhere else.

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World Wide Economic Restructuring

- Rise of the Pacific Rim. Japan is now Canada's second largest trading partner and indeed, passed the U.S.A. recently in volume of trade with British Columbia. Asia is Canada's main source of international students, but

study abroad for Canadians, and international collaboration by Canadian scholars, are still primarily focused on Europe and the U.S.A.

- Continuing world wide restraint in government spending, accompanied by a growing emphasis on the role of the private sector (e.g. structural adjustment programs of the World Bank and other International Financial Institutions). Like other institutions dependent on public funding, universities world-wide are being pushed toward alternate funding sources, including "user-pay" mechanisms.
- Decline in the economic power of the traditional nation state. This is reflected in the growth of multinational corporate activity and in the international movement of goods, services and capital investment independent of any state control or planning. Paradoxically, this could be good news for universities, as the ability to invest in education and training to produce a skilled labour force with a competitive edge, is one of the few policy levers still firmly in the hands of national (or provincial!) governments⁽³⁾.
- Decline in traditional aid funding, "donor fatigue" and the plight of debtor countries in Africa and Latin America. In Canada we know only too well the impact of government spending restraint on Official Development Assistance (ODA) budgets. The impact is further aggravated by the redirection of foreign assistance and investment priorities towards Eastern Europe.
- The 1980's as a "lost decade" for Africa. In the context of higher education, the plight of Africa's universities is particularly severe⁽⁴⁾.
- Prospect of a "peace dividend". For a brief period many hoped that the reduction in both international tensions and the arms race which accompanied the end of the cold war would free up resources to address urgent international development and cooperation issues. Since the Gulf war this expectation has dimmed, however, as the twin priorities of meeting the new challenges posed by regional conflicts as well as the demands of an urgent domestic agenda and deficit reduction more than eat up any savings on military expenditure. The real "peace dividend" may be political rather than economic: progress on issues such as increased democratization in Latin America and Africa, and, particularly, the dismantling of apartheid in South Africa, are clearly linked to the end of the cold war.

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The past few years have seen an extraordinary surge in public interest in and support of the environmental movement.

- Recognition of environment issues as inherently international. The past few years have seen an extraordinary surge in public interest in and support of the environmental movement. Less clear is the extent to which the interdependence of all countries and the environmental threat posed by continuing poverty and underdevelopment are commonly understood. While the 1992 United Nations Conference on the Environment and Development (UNCED) certainly addressed these issues, it also underscored the dangers of a North-South split along "environment versus development" lines.

Changes in Canadian Society

Immigration has changed Canada in fundamental ways.

- The changing demographics of Canada. Immigration has changed Canada in fundamental ways. In our classrooms, teachers at every level, including the universities, are confronted by a student body which is more diverse in language, culture, and ethnicity, than ever before. Many teachers lack adequate training or experience to cope effectively with this new challenge. While it is generally recognized that Canada is increasingly a multicultural society, we should remember that a mosaic is more than a collection of tiles of varied colour and shape: it requires harmonious structure, a pattern, and mortar to keep the pattern in place. Recent events, particularly much of the debate preceding the October 1992 referendum, suggest that we have much more work to do before the rich promise and benefits of a truly multicultural society and nation can be achieved. In particular, we must learn to view this diversity as a resource and an opportunity to be grasped, rather than as a problem to be solved.

Moving to an "information-based" or "knowledge-based" economy has clear implications for educational institutions.

- The impact of free trade and the government's competitiveness agenda. Moving to an "information-based" or "knowledge-based" economy has clear implications for educational institutions. The link to Canada's competitiveness has already been mentioned. If NAFTA is ratified, relations with universities in the U.S.A. and, particularly, Mexico, may alter substantially. In this trilateral relationship, the Canada — Mexico links are the weakest by far. Canada will need to act decisively to avoid having its ties with Mexico completely determined by an American agenda if NAFTA is to be a benefit.
- Continued spending restraint by both federal and provincial governments. This impacts on university funding, research spending, official development

assistance, support for scholarships, exchanges and other award programs. Clearly it is a world-wide phenomenon with complex causes only partially attributable to public policy decisions. Yet "Reaganomics" and "Thatcherism" have strongly influenced current Canadian government policy. There are recent signs that responsible voices in the Clinton administration in the U.S.A. will press the case for more government intervention in areas such as education and infrastructure. For the first time in some years, this would present a credible alternative to the "leave it all to the free market" school which has dominated public policy for the past decade⁽⁵⁾.

- Constitutional issues, with the prospect of greater devolution from the federal government to the provinces. While this is "on hold" since the October 1992 referendum, the issues remain unresolved. Uncertainty in such matters as the federal-provincial division of powers and the future of transfer payments will make such items as national goals for education or a policy on international students extremely difficult to achieve.

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What is Internationalization of Education?

Let me try to frame a definition via a quotation from Donald Kennedy (President, Stanford University):

"Education for this new world begins with international education. Nations like the US and Canada are being called upon to contribute in entirely different ways to this strikingly new and often unfamiliar world without borders. Stanford hopes to expand .. programs so that overseas experience and international issues become part of the atmosphere of campus life."

As we move into the 21st century, "quality" in education demands that it have a strong international component. It is no longer acceptable to educate the next generation of Canadians to understand their own neighbourhood, province or country. Their own careers, and Canada's need for an educated citizenry, demand that their knowledge, sensitivity and understanding extend to the entire world.

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Let me underline the word sensitivity. The business world is awakening to the importance of understanding and respecting the culture, customs and language of their clients when doing business abroad. Universities face the same challenge, and must harness the resources both to address it in their own programs and to assist others in meeting it. They face the further challenge of ensuring that the next generation of Canadians will have the breadth of experience and vision,

the cultural awareness, and the language skills to navigate successfully in Kennedy's "world without borders".

This, however, will require a change in outlook, as well as an extensive restructuring of the policies and procedures, programmes and curriculum of the university. At the risk of over-emphasizing Stanford's contribution to the discussion, let me offer you another quote, from Richard Lyman (former president of Stanford):

Most of the world's problems cannot be studied within the confines of a single academic discipline.

"most of the world's problems cannot be studied within the confines of a single academic discipline . . . Everything correlates, and we find economics, politics, culture, psychology intertwined, infiltrating one another, upsetting the applecart for anyone who is determined to see things through the eyes of the specialist."

Why Internationalization?

I well recall, just a few years ago, when an academic colleague of mine returned to Canada after spending a year's sabbatical in Australia. En route, he visited Singapore, Bangkok and Hong Kong. Australia had been no surprise: he was prepared for the skyscrapers and urban sprawl of Sydney — but Singapore astounded him and he could talk of nothing else. With the zeal of a convert he talked of the "new economies" exploding in S.E. Asia. It was something he had been totally unaware of, at least on an emotional level, a few months earlier.

He is not atypical: most Canadians are quite dangerously ignorant about the tremendous changes taking place beyond our borders. And Canadian society itself is growing increasingly cosmopolitan — immigration from Africa and Asia is now the biggest component in our population growth. Television brings the world into our living rooms. The Gulf war was "witnessed" by more people than any preceding conflict in history. Yet the knowledge may indeed be superficial — limited to stereotypes, at a time when we desperately need real understanding.

The education systems of our country, at every level, have a major challenge on their hands ... nothing less than a major overhaul of the system to "internationalize" the education we offer to every Canadian.

The education systems of our country, at every level, have a major challenge on their hands. I would suggest that it is nothing less than a major overhaul of the system to "internationalize" the education we offer to every Canadian. Indeed, we should see this as part of the internationalization of Canadian society itself. Nothing less will be adequate if Canada is to play an effective role, indeed is to survive as a trading nation, as we move toward the next century.

For in fact, although many Canadians may be ignorant of the changes occurring in the world outside our boundaries, none of us are insulated from their effects. The dramatic changes in world trade and the state of international capital markets affect every one of us daily. Leaders in

both government and industry are agreed on one thing: for Canada to prosper in the decade which has already begun, we must prepare our students to function effectively in an integrated yet increasingly competitive world economy.

The Present Situation

Let me now describe a few examples from various countries of developments in international education:

Programs such as ERASMUS, TEMPUS and LINGUA, funded by the European Community, are by now well known. It is interesting to recall that the Treaty of Rome made no mention of education. Europeans realized quickly, however, that if the goals of regional integration were to be achieved, a major reorientation of educational effort was called for. The outlook, skills, experience, and linguistic competence of the next generation of Europeans would have to be quite different from that of their parents. The programs to promote student mobility now represent an annual expenditure by the community of roughly half a billion dollars. The goal is to have 10% of post-secondary students studying for at least one term in a different EC member state. I note in passing that the U.S.A. has bought in to TEMPUS and is actively negotiating some form of participation in ERASMUS. Canada is not at the negotiating table.

The outlook, skills, experience, and linguistic competence of the next generation of Europeans would have to be quite different from that of their parents.

East Europe universities will have to implement entirely new systems of governance — policy manuals, committee structures, faculty organizations, in fact an entirely new decision making apparatus, and train a new generation of managers in this new and unfamiliar territory. Meeting these challenges while at the same time restructuring the curriculum will require major assistance and resources from other countries. Substantial demands on Western expertise are already emerging. Is Canada ready to respond?

East Europe universities will have to implement entirely new systems of governance.

Interest in cooperation with Canadian universities is growing rapidly in Taiwan, South Korea and Japan. Their governments are providing resources to support faculty interchange, research cooperation and student exchanges which Canada so far has been unable to match. The federal government has shown considerable interest in promoting these contacts, but resources are very limited, and one senses that the lack of coordination between different levels of government as well as with the university community has seriously weakened Canada's limited response.

In 1988, Japan announced its goal of increasing international student enrollment to 100,000 by the year 2000. So far they appear to be on track: international student numbers (at post-secondary institutions in Japan) have grown from 22,000 (in 1987) to 45,000 (in 1991), through a government coordinated program which is completely integrated with

In 1988, Japan announced its goal of increasing international student enrollment to 100,000 by the year 2000.

the plans of individual universities and major Japanese corporations. Many of these students are drawn from the junior employees of those corporations' offshore branches, and much of the funding is drawn from the private sector. Only 12% of the students are funded by the Japanese government⁽⁶⁾.

The desperate plight of African universities.

I mentioned above the desperate plight of African universities. There is a large reservoir of goodwill and experience in the Canadian university community, particularly among individual faculty who have shared in the growth of education in Africa since the early post-independence period. Yet Canadian university institutional responses are constrained by the pressures to achieve cost recovery on external operations and by the reliance on funding sources such as the Canadian International Development Agency (CIDA). CIDA's own priorities, however, are increasingly driven by a private sector, trade-related agenda. Combined with their growing emphasis on basic education and vocational training, support for higher education initiatives is not faring well.

The energetic marketing of education programs based on full cost recovery, particularly in the Pacific Rim by universities in the UK, Australia and the U.S.A., continues unabated.

The energetic marketing of education programs based on full cost recovery, particularly in the Pacific Rim by universities in the UK, Australia and the U.S.A., continues unabated. Their success, while international student numbers in Canada stagnate, suggests that institutional capacity and resources, and the implementation of focused marketing efforts and incentives, have more effect on international student flows (at least in the countries being targeted) than price. Canada, after all, has lower tuition fees than any of these "competitors". I will return to this point later in the paper.

The emergence of the environment as a major world wide issue has already been noted. We can see hopeful signs of its becoming the focus of international cooperation in scholarly activity on a large scale. Events such as the Halifax conference organized by Dalhousie University with the cooperation of the Association of Universities & Colleges of Canada (AUCC), as well as UNCED and ECO-ED will, we hope, catalyze the development of a long-term university position rather than simply be one-off, isolated events.

Challenges for the University

Cooperative projects and exchanges are still often isolated from the "mainstream" of the university.

Cooperative projects and exchanges are still often isolated from the "mainstream" of the university and even more so from the community outside the university. For example, only 1/4 of the universities responding to an AUCC survey in 1991 reported any formal link between faculty exchanges and the international dimension of the undergraduate curriculum. Only 1/5 reported any mechanism or policy for explicit recognition of international activity in faculty assessment for tenure, promotion, etc.

The undergraduate curriculum needs to integrate these international activities as a vital teaching resource. Explicit links between a university's international projects and its teaching programs, particularly at the undergraduate level, are rare indeed. Greater stress must be laid on the study of foreign languages, and on the experience as well as the study of foreign cultures. Study abroad programs need to be strengthened and extended.

We need to examine how foreign student issues are handled, beginning at the institutional level. There are about 30,000 international students at Canadian universities. But the bulk of these come from just a few countries. Policies and programmes to bring a broader mix of international students to the campus are urgently needed. Too often foreign students remain in a ghetto. We need proactive measures to integrate them into the campus community and to use their presence more creatively — to invigorate the curriculum and expand the experiences of our own students and thus promote the internationalization of the university and the wider community.

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Another survey, conducted by the International Division of the AUCC, revealed that Canadian universities are unanimous in their desire to accommodate a wide range of international students. However, there are major constraints: of capacity in certain programs, shortage of scholarship and research funding and logistical problems relating to credential transfer, language, and so on. Even in those provinces which charge differential fees, and which return them to the universities hosting the students, the revenue generated falls short of full cost recovery. So there are financial issues as well. The survey confirmed a strong university emphasis on the quality of international students rather than on numbers.

At the same time, a number of Canadian posts overseas compare our universities unfavourably with the recruiting efforts of British and Australian institutions in the Pacific rim. In response, Industry, Science and Technology Canada (ISTC) has been mounting a program to encourage the "marketing" of Canadian educational services abroad — in spite of the fact that in the absence of full cost fees, or at the very least a more rational and consistent policy on differential fees, no economic incentive for universities exists.

A number of Canadian posts overseas compare our universities unfavourably with the recruiting efforts of British and Australian institutions in the Pacific rim.

It should also be noted that, to cite one example, Australia's recruitment of Malaysian students constitutes a \$1 billion net flow of educational spending from Malaysia to Australia and is the single biggest factor in Malaysia's brain drain. ISTC would appear to support Canada's following the same path. On the other hand, CIDA officials have questioned the value of scholarships to support developing country students in Canada on the grounds that too many fail to return home at the end of their studies. A consistent policy framework coordinated between ISTC, External Affairs, and CIDA would be very helpful here.

Even more productive would be harmonization with the strategies and policies of provincial governments. While Canada lacks anything like a "national policy on international students", the diversity of stakeholders produces a variety of objectives and is certainly a source of confusion overseas. There is a strong need to provide consistent and clear information to potential overseas partners and students. Notwithstanding the reality of autonomy at every level (individual, institutional, provincial) in the Canadian system, mechanisms for greater coordination should be explored.

American sources credit their large flow of Japanese students primarily to the range of contacts built up through 40 years of scholarly exchange, mainly supported by the Fulbright program.

Student flows follow faculty. A particularly effective way of ensuring a stable flow of quality students is to base it on long term relationships of faculty, established through exchanges, joint research, linking of institutions through joint participation in projects, etc. It is regrettable that Canada does not have extensive scholarly exchange programs such as the American Fulbright program. One example: Canada has about 200 Japanese students enrolled in degree programs; the US has almost 30,000! American sources credit their large flow of Japanese students primarily to the range of contacts built up through 40 years of scholarly exchange, mainly supported by the Fulbright program.

There are about 600 formal exchange agreements between Canadian and European universities. Many of these, however, are empty shells. It will require the imaginative collaboration of universities, the private sector, donors and governments to generate the resources necessary to activate them. With external funding in short supply, universities will need to develop mechanisms for "no-cost" exchanges.

Development Projects

In the old "development assistance" paradigm a project was something Canadians "did" by traveling abroad to assist a university overseas. In the other direction, students or junior staff from the overseas institution might come to Canada to enroll in our post-graduate programs to pursue a Canadian degree in a program designed and delivered by Canadian professors. We are all familiar with the critical analysis of this paradigm of "aid" as something which flows from donor to recipient — how it leads to inappropriate inputs and technologies, the absence of "ownership" by the recipient university, and ultimately a lack of sustainability, problems of brain drain, and so on. CIDA has given every indication that they take such criticisms seriously.

We are all familiar with the critical analysis of this paradigm of "aid" as something which flows from donor to recipient.

We know as well the newer paradigm of partnership, in which a linkage is something into which both partners provide inputs and reap benefits at every stage: joint planning, joint implementation, and joint evaluation. Since this approach was emphasized by CIDA in "Sharing Our Future", it appears to be an increasingly important factor in project selection decisions.

But I maintain that we need to go even further.

Linkage projects are still often isolated from the "mainstream" of the university, particularly on the Canadian side, and even more so from the community outside the university. Here is where leverage effects can have a great impact.

Cooperation and joint ventures involving community groups, NGOs, and private sector firms, can enlarge the networks of resources involved in a project and can build relationships and activities which persist after the formal project funding has ended. Such joint ventures with the private sector (interpreted broadly — one can include both Canadian firms and enterprises overseas) can support cooperative or work-study programs which will strengthen the link between academia and the world of work. Public understanding and support for development assistance in education will also be enhanced.

Within the campus community, opportunities should be sought to use development projects as teaching tools, through the active involvement of students in the projects themselves. The "partnership" concept needs to be constantly re-examined to ensure that projects are indeed implemented by networks of colleagues from all the participating institutions. How many projects, for example, lead to the appointment of overseas colleagues as adjunct professors at Canadian institutions?

Within the campus community, opportunities should be sought to use development projects as teaching tools.

Challenges for the Canadian University Community

Internationalization of the University also presents collective challenges to the entire university community and thus to the AUCC, as its national embodiment.

First, we must be vigorous advocates to various branches of the federal government for the universities' role in international activities. This must include defending existing scholarship and exchange programs and arguing for their extension. It must include the promotion of student mobility — both a consistent approach to the hosting of foreign students and the growth of study abroad opportunities for Canadians. We must ensure that as CIDA's policies evolve, the special role which universities — and only universities — can play is taken into account. And we must argue, on behalf of our academic colleagues in the developing world, that in the setting of development assistance priorities the special needs of young and struggling universities in many countries are not ignored.

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Second, we must ensure that the richness and variety of the AUCC's membership and the complexity of their international agenda are fully represented. This means working with the granting councils in support of international collaboration in research. It means ensuring that

universities participate effectively in activities following on the U.N. Conference on the Environment and Development. It means that the special strengths which smaller institutions bring to international cooperation are fully understood and supported by government agencies such as CIDA and IDRC.

Third, we need to promote and facilitate the provision abroad of consistent, comprehensive and accurate information about Canadian universities and their programs. Participation in TRACE⁽⁷⁾ will lead to the creation of a consistent comprehensive database on university programs, as well as providing access to similar information from other TRACE member countries. New information products, such as a specialized guide to graduate study in Canada, should be introduced. Many agencies and private firms are assembling such data and their requests for information pose a significant burden on individual universities. The AUCC could play a useful role in coordinating data gathering both to ensure quality and to reduce the response burden on member institutions.

Fourth, the Canadian university community should consider the greater coordination of certain international activities. Most of our competitors (U.K., Netherlands, Australia, for example) have mandated a national agency to play a strong coordinating role. This has never occurred in Canada. Of course, coordination may mean many things. It can be as simple as ensuring that planning missions do not "trip over each other" in simultaneous and competing visits to the same university overseas. It may be as complex as pulling together the resources of a variety of universities as part of an international consortium to bid on a World Bank project. It is often questioned whether such coordination activities belong in the AUCC. But equally it seems clear that without some such mechanisms, Canadian universities will continue to miss important opportunities for extending their international participation.

Finally, both the Canadian university community and the AUCC should recognize that certain international commitments should be met, even though they may never generate a "profit" either for the individual university or for Canada. It is not mere sentiment to talk of an international community of universities, and Canada's membership in that community, as a relatively wealthy participant, does indeed carry obligations. Only a generation ago, Canada and its universities benefited enormously from the generosity of countries such as Britain, France and the U.S.A. in providing advanced training and support at the post-graduate level to tens of thousands of Canadians. Canadian universities can now, in turn, play their part — a role in which we should not be ashamed to let altruism have some influence. We should constantly remind the government that self-interest, no matter how enlightened, should never be the final determinant of development assistance policy.

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Conclusion

To return to my opening text, I would submit that Marshall McLuhan's metaphor of the "global village" is patent nonsense — at least to the degree it suggests that technology will automatically link us together in a simpler future in which we all understand one another. For it should be clear by now that the transmission of data is not at all the same thing as the achievement of shared understandings.

I spoke above of the Gulf war. Who would maintain that after the thousands of hours of television coverage, the average viewer had any better understanding of the Arab world or the complex issues of middle eastern politics?

I would suggest that a more realistic and admittedly gloomy metaphor for the modern world would be the "global metropolis", a kind of planetary Manhattan or Los Angeles, with all its stresses and strains: overcrowded, living near (or perhaps beyond) the limits of its capacity, with gross disparities between rich and poor, between those who control resources and those who consume them. Different communities live side by side (at least electronically) and interact for purposes of business and trade but remain divided by culture, by language, by religion. We pass each other on the street but avoid eye contact. Or we switch channels.

Yet, if there is an emerging global community, I would suggest that it may be found, at least in embryonic form, in the universities. In the dark days after June 4, 1989, communication between students and faculty in China and Canada was one of the vital links transcending the deep divisions separating the Chinese government from the outside world. Another example: it is no accident, I submit, that the dramatic changes in Eastern Europe have been spear headed by students and faculty of the countries' universities, and that they are often the leading representatives abroad for the new emerging order.

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We have a long way to go before the international community of universities can truly be called a global village. But I hope the rather sketchy remarks above may suggest some steps which might advance the process a little. And even those steps are just a beginning. For the larger challenge will be for the universities to invigorate the external communities around them and so contribute to forging the greater links and wider understandings which can lead ultimately to a true global village — not just for faculty and students — but for all mankind.

There is, of course, an alternate, more pessimistic scenario. In this view, Canadians will soon realize that the revitalization of East & Central Europe is a European challenge in which Canada's involvement will be minimal; that 1992 and Maastricht represent a closing of European doors rather than an opening of new opportunities; that we cannot compete with the internationalization thrust of American

universities with their far greater resources; that "donor fatigue" and shrinking development assistance funding dictate a decline in cooperation with African universities, and that the attractions of Pacific rim cooperation fade when quick and easy results do not flow.

Preoccupied with our internal concerns: regional and even institutional competition, economic restraint, deficit reduction, and above all, the constitution and Canadian unity, we would put the international agenda on a very cool back burner. I believe that this scenario would be woefully misguided — but it is certainly possible. Governments, corporations, the public, and our national organizations and associations will all have some influence on what happens. But if autonomy of the universities means anything at all, we cannot avoid the conclusion that, ultimately, the choice is our own.

Notes

1. This paper is a revised and updated version of a speech delivered to a meeting of the Association of Atlantic Universities at St. Francis Xavier University, September 17, 1991.
2. The Medium is the Message, 1967
3. The Work of Nations, by Robert Reich, is an excellent and original analysis of this phenomenon. As he is now the Secretary of Labour in the Clinton administration, one may expect that Reich's views, particularly on the relationship between globalization, education, and labour force development, will have considerable influence.
4. See, for example: A Consultation on Higher Education in Africa, Trevor Coombe, 1991, available from the Ford or Rockefeller Foundations, and also, even more recently, Universities in Africa, Strategies for Stabilization and Revitalization, William S. Saint, World Bank Technical Paper No. 194, 1992.
5. Twenty-First Century Capitalism, by Robert Heilbroner (the 1992 Massey lectures), presents a cogent argument that the pendulum is already beginning to swing back from the uncritical worship of "the market" which was characteristic of the past decade.
6. I am indebted to Prof. Teruyuki Komatsu of Nagoya Gakuin University for this information on Japanese programs for international students.
7. TRACE is the Trans-Regional Academic Mobility & Credential Evaluation Information Network. This is a major international database project on higher education institutions and their programs. Canada is one of approximately 30 participating countries.

PART II
OCEANS AND DEVELOPMENT

Introduction

by Robert Fournier

The oceans and their resources have long been taken for granted by those with ready access. The history of Eastern Canada has largely been defined by its proximity to the sea. It was by sea that early invaders and explorers, fishermen and colonizers came, journeyed on or accessed areas for settlement. For generations of those in the growing numbers of towns and outports along the coast, the sea provided both the major routes for transportation and a core source for food and income.

Over the years, as land routes and air transportation have mushroomed and as Canada has built a sophisticated continental economy, so by many the value, fragility and potential of the ocean environment has been under assessed. The fish were long treated as unlimited, the sea as a dumping ground for waste was viewed as invulnerable, the coastal zone was not seen as an area to be responsibly 'managed', but simply as a boundary of provincial and federal jurisdictions.

All that has changed. Both the oceans and the coastal zones are recognized to be both fragile and the dynamic habitats of complex ecosystems. It has become clear, furthermore, that competition for the use of their various treasures has been escalating to the point where the threat of major disasters is no mere vague or futuristic nightmare, but a daily reality. Nuclear fueled and nuclear armed warships enter the waters, offshore minerals are increasingly being mined, toxic wastes are routinely being disposed through countless sewer outlets, tourist developments jostle with industrial complexes for coastal properties and bio-diversity is under relentless pressure.

In ecological terms the boundary between ocean and land — the coastal zone — is referred to as an ecotone. Its single most important feature is that it is transition between two distinct environments. With that transition comes biological richness and diversity, physical complexity, and aesthetic beauty. Conversely, the coastal zone's proximity and complexity require problem solving approaches of considerable sophistication. Potential workable solutions will surely elude all but the most interdisciplinary and broadly based assaults. Sophisticated technology will in itself be insufficient without well trained and highly motivated individuals. Remediation of the environment is not unlike the approach used in medicine — a combination of technology, intuition, and skill marshalled to solve and treat vexing problems. The availability of resources, such as those which exist in universities, will be a key component in the struggle to be faced in the years ahead.

For universities that have the privilege of coastal locations, the oceans present enormous challenges and opportunities. Many at Dalhousie University have been increasingly recognizing this fact and it has been on ocean related themes that their teaching, research and community policy interests have focused. This has been reinforced by 'mission statements' of the university and by the evolution of processes, such as an 'oceans forum' and various ocean programmes that have been designed to bring together resources and insights from across disciplines and organizations (public and commercial) to work on ocean related problems and opportunities. Inevitably this has had many international implications. The following papers, by Elisabeth Mann Borgese, Roger Doyle and Gary Newkirk give some flavour of a rapidly growing number of international networks that have been fostered by members and units of the university.

4

THE TRAINING PROGRAMME OF THE INTERNATIONAL OCEAN INSTITUTE AT DALHOUSIE UNIVERSITY

by Elisabeth Mann Borgese

Although the focus of this chapter will be the 12-year Dalhousie sector of the project, I shall begin by setting this in the broader context of the full project which now spans almost half a century (starting in 1945) and has required cooperation with a number of institutions (the University of Chicago; the Center for the Study of Democratic Institutions; the University of Malta, and an increasing number of others).

Origins

Chicago, with its "Stagfield," as is well known, was an essential component of the "Manhattan Project" that produced the first nuclear bomb. Enrico Fermi, Eugene Zillard, Jerome Frank, and others, operated out of Chicago. Uneasy about this contribution to "civilization," Chancellor Hutchins, a Pacifist and humanist, vowed that the University that split the atom had now the responsibility of trying to put the world together. Early in 1946, he launched the "Committee to Frame a World Constitution," a group of scholars from various Universities, disciplines, and national backgrounds. After three years of intensive work, to which Hutchins devoted a whole building, a research staff and a publications programme, this Committee published a "Preliminary Draft of a World Constitution" which deviated from the then current trends of world federalist literature and in many ways anticipated the tenets of world order studies of a quarter of a century later.

The broadly interdisciplinary character of world order issues, the need for new forms of cooperation between science, economics and politics (horizontal, trans-sectoral, interdepartmental integration) as well as between local communities, national governments, and regional and global institutions (vertical integration between levels of governance) was already well recognized. This holistic approach to the world's problematique, as the Club of Rome was to call it 20 years later, led us to reject the "minimalist" concept of a world government "with powers adequate to prevent nuclear war" or even conventional war. Peace, we

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were convinced, had to be founded on social and economic justice, or as it was put later, on a "new international economic order. **Pax opus justitiae** was the Committee's motto. Such an order had, first of all to get rid of colonialism, and we worked closely with Fenner Brockway's (later, Lord Fenner Brockway) Peoples' Congress Against Colonialism. Secondly, however, it could not be based on the traditional concepts of absolute Sovereignty and Property. Turning to non-Western, non-Roman legal and philosophical concepts, the Chicago Draft Constitution declared not only the oceans but, borrowing the terminology of the Rev. Hewlett Johnson, Dean of Canterbury, all the "elements of life": Water, land and its resources, air (atmosphere), and fire (energy) to be the common property of mankind.

The Chicago Draft Constitution made some impact in academic and NGO circles. It was translated into some forty languages, including Mongolian, and sold/distributed in a million copies.

That was as far as it went. Then came McCarthyism and the Korean war, and World Federalism disintegrated.

Twenty years later, Robert Hutchins established the Center for the Study of Democratic Institutions, with a large endowment from the Ford Foundation supplemented by the Xerox Company. The purpose of the Center was not only to study but to save democratic institutions from the threat of McCarthyism. It became soon clear, however, that "Democratic Institutions" was a complex issue indeed, that had to be dealt with at interlinked national and international levels. The study of democratic institutions thus required world order studies, and it was in this context that Robert Hutchins called me back and asked me to take up what we had left behind 20 years earlier.

I tried: I found the Chicago work as inspiring as ever, but as remote from reality as ever.

*Pacem in Maribus, Peace on
the Oceans.*

It was at this juncture that the Law of the Sea issue was assuming increasing importance on the international agenda. In the summer of 1967 I suggested to Robert Hutchins that here was an area where we could connect our ideas and ideals to real politics. The oceans, I suggested, were a great laboratory for the making of a new international order. He gave me carte blanche to organize a project to elaborate "a constitution for the oceans." This was to last three years and lead to the publication of a monograph, *The Ocean Regime*, and an international conference which, in analogy of the Center's ongoing *Pacem in Terris*¹ Programme, I proposed to call *Pacem in Maribus, Peace on the Oceans*.

¹ *Pacem in Terris* was the title of a famous Encyclical of Pope John XXIII, devoted to issues of war and peace. Published in 1962, it was widely hailed, by Christians and non-Christians alike, as the most progressive, comprehensive and constructive approach to world peace.

The Ocean Regime tried to apply the basic principles of the Chicago Constitution to the new medium, the oceans, and this was done through a series of workshops and seminars with outstanding leaders in the Law of the Sea, the marine sciences and the marine industries. Six volumes of research papers were compiled as background material for *Pacem in Maribus*.

Pacem in Maribus, held in Malta in 1970, led to the establishment of the International Ocean Institute in Malta. It also opened the way to the Institute's active and continuous involvement in the Third United Nations Conference on the Law of the Sea (UNCLOS III) whose President, Ambassador Shirley Amerasinghe of Sri Lanka, became also President of the International Ocean Institute's Board of Trustees.

As the Institute developed its programme of policy research, publications and conferences, it became increasingly apparent that, if developing countries were to play an active role in the emerging ocean regime, a great deal of training and technology "transfer" was required. *Pacem in Maribus* convocations took place every year, bringing together the Law of the Sea, marine science and marine industry communities. The Institute was supported by very modest, not to say, minuscule, means provided initially by UNDP and the University of Malta. The qualifications listed in successive versions of the Drafts discussed by UNCLOS III for membership in the Sea-bed Authority's major technical and decision-making organs were so demanding that few developing countries could have filled the bill. Management of the Economic Zone, likewise, required new skills which few countries possessed.

To contribute, no matter how modestly, to meeting this challenge, the International Ocean Institute launched, in 1976, the proposal for a comprehensive training programme for civil servants in developing countries. It took four years to put it together and to raise the necessary funds. The first IOI training programme took place in Malta in the summer of 1980.

Since then, over 40 programmes have been held, in Malta, at Dalhousie, in the Caribbean, the Indian Ocean, in India, in China and in Africa. More than 700 participants from over 100 developing countries have participated in the programmes. Lecturers have been recruited from all parts of the world: North, South, East and West as well as from the United Nations and its Specialized Agencies. Special efforts are made to involve the leaders of UNCLOS III and give them an opportunity to pass their unique experience on to the next generation of decision makers. Thus UNCLOS President Tommy Koh of Singapore was the Director of one of our 10-week programmes at Dalhousie. Programme Directors have come almost without exception from the developing countries themselves and included other leaders of UNCLOS III, such as S.P. Jagota, the powerful leader of the Indian Delegation, or Reynaldo Galindo Pohl, the Chairman of the Second Committee of

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UNCLOS and main author of Parts I-X of the Convention. Recently, the IOI has been awarded a grant of US\$ 2.6 million to consolidate and expand its training programmes in various parts of the world through the establishment of operational centres in India, Colombia, Fiji, and Senegal.

The Dalhousie Training Programme

Twelve of our most successful training programmes have been held at Dalhousie, in cooperation with the Centre for Foreign Policy and Lester Pearson Institute, the Marine Affairs Programme (IOI), and the Oceans Institute Canada. While the International Ocean Institute has benefited greatly from this cooperation, we do feel the programme could be of considerable benefit to Dalhousie.

The University as an institution is faced with the challenge of adapting to the interdisciplinary, global character of the issues confronting humankind in the 21st century, the need for networking, commitment and the capturing of intellectual leadership.

In concept, recruiting, staffing, and funding the IOI programme has tried new ways which might be followed, with due variations, in other development — and possibly other university — sectors as well. The University (not just Dalhousie!) as an institution is faced with the challenge of adapting to the interdisciplinary, global character of the issues confronting humankind in the 21st century, the need for networking, commitment and the capturing of intellectual leadership. In its informal, often rambling, and risk-taking way, the IOI programme has gone some way in these directions.

Concept

All major issues today are interdisciplinary, no less than the ocean issue.

All major issues today are interdisciplinary, no less than the ocean issue. The strictly departmental division governing university programmes is, sometimes, not conducive to directing research towards innovative solutions to interdisciplinary problems. The IOI training programme is genuinely interdisciplinary. It is trying to bridge the gap between participants with a scientific background (marine geology, marine biology, etc.) and participants with a legal/economic/diplomatic background by giving an introduction to marine sciences to the nonscientists, and an introduction to marine law and economics to the scientists in the group. They will have to work together in the future: A training programme like ours can lay the basis for this cooperation.

IOI research is unambiguously based on a philosophy which I like to call "the philosophy of the common heritage."

IOI training programmes are closely linked to IOI policy research, and trainees are encouraged to participate and contribute to this research. IOI policy research, in turn, is closely linked to issues currently under debate in the international community: from "sustainable development" to the restructuring of the U.N. system, where, again, the marine sector, as basis of the Environment restructuring, can be considered a lead sector and pilot experiment. IOI research is unambiguously based on a philosophy which I like to call "the philosophy of the common heritage." Without such a philosophy, we are convinced, it is

impossible to convey the need for a new approach to environment and development, and we unabashedly try to instill it in our course participants.

There has been a lot of discussion about the advantages and disadvantages of having programmes in the developing countries themselves vs having them in industrialized countries.

Developing-country venues undoubtedly have a number of advantages: The impact of a ten-week programme at a technical institution in a developing country is greater, and there may be more spin-off effects. The issues discussed are more likely to be region-specific; participants are not exposed to technologies and methodologies that are alien to them and thus may be spared frustration experienced instead by their colleagues when they come home from studies in the "North" only to find out that they cannot apply at home what they have learned abroad.

The disadvantages are of an operational kind. Communications, whether by plane, phone, or electronics, are often more difficult. Lecturers may fail to arrive. Photocopying facilities may be inadequate, etc.

Courses in industrialized countries are easier to organize and to run. Marine sciences and technologies, vessel traffic control systems, etc. can more easily be demonstrated. Linkages may be formed between participants and government authorities or private sector which may be of lasting value to the participants, as well as to the developed-country partner. The disadvantages are that the programme may be more costly; that it may be alienating, and that developed-country lecturers sometimes tend to expand on issues, such as oil spills in ice covered areas, which may be irrelevant for participants from tropical countries.

We found that the advantages of both types of courses are worth pursuing, and it has become our policy to organize courses both in developed and in developing countries.

Our Class A Programme, which originally concentrated on the issues of sea-bed mining as emerging from Part XI of the Convention and which now deals more broadly with the issues of developing and managing high technology in developing countries, is held alternately in an industrialized and in a developing country. Class B, dealing with extended economic zone (EEZ) management is regularly held at Dalhousie and in Malta; for the second time now, it is also going to take place in China. Class C, on regional cooperation and development, has several components: The course on the Mediterranean is held alternately in the North and in the South of the Mediterranean; The Caribbean, Indian Ocean and South Pacific programmes are always held in developing countries.

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What do we expect participants to "take home" from the programme?

- A better understanding of the fundamental importance of the oceans in the global life-support system;
- A better understanding of the unity of ocean space and the interconnectedness of issues;
- A better understanding of the fundamental importance of science, technology and human resource development for economic growth;
- An awareness of the state of the art of integrated ocean management;
- A better understanding of the global/regional/national legal and institutional framework in which the participants have to operate;
- An ability to ask the right questions and to have an idea as to where to look for the right answers;
- An improvement in negotiating skills.

A better understanding of the fundamental importance of the oceans in the global life-support system

Recruitment

All candidates for IOI training programmes are nominated by their Governments or State universities and institutions or regional intergovernmental organizations. This is a requirement of most of our funders. It is to ensure that participants will return to their home countries after completion of the programme. IOI requires that candidates should have a least one university degree and two years of working experience, plus an adequate knowledge of English (we are now developing courses in French and Spanish). We annually send announcements of our programmes to the Ministries of Foreign Affairs as well as to the academic and technical institutions with which we are networking. Our best recruiters, however, as it turned out, are our alumni. They know the programme; they know the needs of their countries, and we can rely on their recommendations.

Our best recruiters, however, as it turned out, are our alumni.

About the required University degree we are not particularly strict: We have admitted candidates without any degree, and they have done well. Given the revolutionary situation in many countries, it often happens that a person is unable to complete formal studies and has learned, instead, on the job. Natural intelligence and working experience may easily compensate for the lack of a degree. As an NGO, IOI is not prevented by any red tape from accepting such participants, to which an IOI certificate is issued upon completion of the programme. Participants in our courses thus are of two kinds: Academically

qualified persons (MAP students, students of Political Science, Law School, Marine Biology, etc.), who enter the programme through the Office of the Registrar, pay University tuition, and are given credit towards a degree for the course which is a recognized course within the University and bears the number 5537. The second kind of participants do not qualify formally for entry into the University. They come on IOI scholarships; and they receive an IOI certificate. It is, however, highly beneficial and stimulating for these persons to spend three months at Dalhousie. Some of them return later as regular Dalhousie students.

The proportion of women in the programme is about 20 percent on the average. Mostly they come from the fisheries sector; some come from international law and diplomacy. There are very few women in the marine sciences, technology, and shipping.

Staffing

The entire IOI programme is based on networking and cooperation. The network developed over twenty years is rather wide. It includes a large number of first-rate experts in marine affairs who feel as "missionary" as we do and give us their services free of charge. This enables us to put together a rather exceptional faculty for each programme, symbolizing the interdisciplinary and global character of the programme and its direct relevance to decision-making. In the past, we have had as many as 30 outstanding lecturers during any one programme. Usually they stayed for one or two days. We are now trying to reduce the number to 10-15 and encourage them to stay for one whole working week, to intensify relationships between them and the participants. This requires long-term planning (at least one year ahead of time), but even with such planning it is not always possible, given the very busy schedule of these outstanding personalities, including Ambassadors, Judges of the International Court of Justice, Heads of U.N. programmes, even a Prime Minister on one occasion! It is the informal, independent character of the programme, which is half within the University and half without it, that enables us to benefit maximally from networking to attract personalities to Dalhousie who might not otherwise come.

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Funding

Our network of funders is almost as diversified as our network of lecturers and participants. As a matter of fact, these networks developed together.

While original seed money for the first programme had been provided by SIDA (Sweden), the principal, most constant and most generous contributor was to be CIDA (Canada). Other major contributors were

the Commonwealth Secretariat, UNEP, UNESCO/IOC, UNDP, Finland, Norway, the Netherlands, Italy, India, Trinidad and Tobago, the OPEC Special Fund, and private donors. The average cost of the programme (including air fares, room and board for participants and lecturers, fees for the course Director and staff, preparation of course material, field trips, medical insurance, pocket allowance for participants, communications, printing of final reports) is roughly \$1,000 per participant per week. Most programmes run for 10 weeks (6 hours a day; 300 class room hours in ten weeks, plus field trips, library research, etc.)

A course is self-sufficient with 16-18 scholarships; when these are available, the programme can support another half dozen participants on "IOI scholarships."

This scholarship scheme is an integral part of the whole concept.

The training programme has been the growth sector in IOI activities. Actually, it has carried the institution.

Evaluation

An evaluation scheme is built into the programme. Evaluation questionnaires are distributed to all participants before the end of every programme; and one half-day session, in every programme is devoted to discuss with the participants strengths and weaknesses of the programme. Participants as well as lecturers are invited to make suggestions for improvements, updatings, new items, for inclusion in next year's programme. Next year's syllabus is based on this discussion.

When the programme goes to a new country, a workshop is first planned with local experts to so as to focus the programme on the real issues of importance.

When the programme goes to a new country, a workshop is first planned with local experts to so as to focus the programme on the real issues of importance. While the basic structure and the spirit of the programme have remained constant, details vary from place to place and time to time, and no two programmes are identical. One point that is continuously stressed is that the programme is what the participants make it to be.

There has been one external evaluation, made by the International Centre of Ocean Development (ICOD). CIDA's renewal of a five-year grant totaling \$2 million, was based on that evaluation, among other things.

Future Cooperation with Dalhousie

We think it would be mutually beneficial if the training programme, as well as some of the policy research were integrated more fully into Dalhousie programmes. To a certain degree this is already the case.

Joint seminars on policy research have taken place at Lester Pearson Institute, and this cooperation has been rewarding. As mentioned above, the training programme is a recognized course in Political Science. But the programme was not properly integrated into the MAP programme, entailing duplication of efforts and waste of resources. We would hope that this situation could be improved in the future, in the context of the new Marine Management Master's programme. We would envisage that the IOI programme, content, recruiting, staffing and funding, could constitute the Foundation course: the interdisciplinary component of the Master's Programme, supervised by a programme committee consisting of IOI and Dalhousie faculty. Some participants would only take this Foundation course. Others would go on to the Master's programme where they now would concentrate on more "specialized" (although still interdisciplinary) project or thesis work. This would be a simple and logical structure for the Master's programme, cutting out duplication and waste of resources. The IOI would benefit from this consolidation and "legitimization." Dalhousie would benefit from the influx of new students, outstanding international lecturers, and new funding sources.

The training programme is a recognized course in Political Science. But the programme was not properly integrated into the MAP programme, entailing duplication of efforts and waste of resources. This situation could be improved in the future, in the context of the new Marine Management Master's programme.

Secondly, in accordance with suggestions made by other colleagues, and I would like to mention in particular Ronald Macdonald and Ian McAllister, the same, or a very similar, model might well be adopted for broadly interdisciplinary subjects in other areas: Sustainable Development; abolishing hunger; energy policy, etc.

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5

AQUACULTURE FOR DEVELOPMENT: AN ASIAN NETWORK

by R.W. Doyle

This chapter embodies two papers identified as Part I and Part II. The first explains Dalhousie University's role as coordinator of an Aquaculture Genetics Network in Asia, supported by the Canada's International Development Research Centre. The second paper, somewhat more technical in style, argues that national breeding programmes for aquaculture should seek to develop numerous breeds especially adapted to local environments and aquaculture systems.

Part I. Dalhousie University and an Asian Network for Aquacultural Development

Aquaculture plays an important role in the financial and nutritional economies of much of rural Asia. The production of cultured fish is increasing at a rate which, in many places, is limited only by the availability of high quality fish "seed" for stocking. Now that the breeding of several important species is routine, genetic improvement of cultivated fish has become possible. Great benefits can be expected from the development of new strains of fish that are productive and disease-resistant in domestic environments.

Aquaculture plays an important role in the financial and nutritional economies of much of rural Asia.

National genetics programs in aquaculture are expected to handle a broad range of genetic problems, including susceptibility to disease, excessive mortality, inbreeding and poor growth of the existing strains of many cultivated species of fish and shellfish. No single country in the region has the expertise or technical facilities to undertake a comprehensive aquaculture genetics program.

Starting with a project at the National Inland Fisheries Institute in Thailand (NIFI) in 1982, the International Development Research Centre, Canada (IDRC) has been supporting aquaculture genetics research projects in Asian countries and helping to link them with similar activities in western countries. IDRC is currently supporting aquaculture genetics projects in China, India, Indonesia, the Philippines and Thailand. Since 1986 these projects have been grouped in its Aquaculture Genetics Network in Asia (AGNA), under the overall coordination of Dalhousie University.

Objectives of the AGNA Aquaculture Genetics Network

The principal goal of the programme has been to develop new measurement procedures, genetic models and selection protocols that are appropriate for use in developing countries.

The principal goal of the programme has been to develop new measurement procedures, genetic models and selection protocols that are appropriate for use in developing countries. Closely related objectives are to produce superior strains of fish by efficient artificial selection and hybridization, to maximize the rate of domestication and minimize the inbreeding of present stocks, and to enhance the scientific capabilities of Asian countries through formal training and cooperative research. Probably the most important consideration throughout the history of AGNA has been to build up the scientific capabilities of Asian countries through formal training and cooperative research. The intention has been to evolve from an initial position of North/South collaborative strength to a position of regional, national and institutional strength in developing countries.

Technical Objectives of the Current AGNA Research Programme

Owing to their limited size, the AGNA members have tended to specialize on one or a few aspects of aquaculture genetics. At the present time AGNA is rather sharply focused on quantitative genetics, in particular on optimizing procedures for the selection and domestication of carp and tilapia. This focus is subject to reconsideration as new opportunities become available.

Dalhousie's Research and Networking Contribution

Dalhousie's role in AGNA has been to help develop new measurement procedures, genetic models and selection protocols that are appropriate for use in developing countries, and to provide short- and long-term training and collaborative research. Dalhousie has been fulfilling two functions during the evolution of the AGNA network: network coordination and active participation in collaborative research.

The AGNA projects are linked by various types of exchange programs to ensure that the specialized expertise training capabilities and research findings of geneticists in each country are readily available to the others, and that duplication of effort is avoided. *The AGN Technical Forum* (a monthly newsletter) is one component of the information exchange programme. Personnel from each project are in contact with others in the project, approximately every 18 months at a Network meeting. Representatives from ICLARM and other selected researchers from Asia and elsewhere are also invited who are not presently receiving IDRC research support for genetics projects. The agenda of the meeting includes group discussion of all the research results, formulation of updated research plans, and group consideration of special problems in data analysis.

All projects are visited twice a year by someone from Dalhousie. Special attention is devoted to exchanging data and statistical expertise during the site visits, meetings, regional personnel exchanges and other network functions. This is facilitated by the use of compatible microcomputers and software in each subproject. The long term objective is to build up regional self-sufficiency in analysis of quantitative genetic and brookstock management data.

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Technical Progress

Considerable progress has been made in a number of research areas since the network started in 1985: (1) implementation of experimental hybridization and selection programmes to enhance the productivity and value of carp and tilapia stocks, (2) development of several new procedures for field evaluation of existing and new genetic strains, (3) development of more productive strains of tilapia in Thailand and the Philippines, (4) genetic conservation of rare, genetically distinct breeding stocks of common carp in Indonesia, (5) training of staff from all projects and publication of research results in international journals and symposia. At last count more than 40 refereed papers in aquaculture genetics have been published by AGNA members since 1985, the great majority of which have been co-authored by researchers from two or more AGNA institutions.

At last count more than 40 refereed papers in aquaculture genetics have been published by AGNA members since 1985.

Institutional Challenges and Opportunities

There are still a number of major obstacles facing the development of fully-capable aquaculture genetic research institutions in SE Asia. These difficulties include the following:

- (1) Strong and rapidly changing national research imperatives;
- (2) Limited numbers of trained people at each institution;
- (3) Limited national government support;
- (4) Administrative obstacles to the formation of interdisciplinary and inter-institutional research teams;
- (5) Unequal research capabilities and technical sophistication among the member countries;
- (6) Decreasing funding from international aid agencies.

The Genetic Challenge of the Future: New Breeds vs Biodiversity

IDRC has recently been joined by other international agencies and national governments in sponsoring aquaculture breed improvement projects, utilizing a wide variety of classical and modern genetic methodologies. There can be little doubt that many of these ongoing aquaculture genetic activities will be successful in the near term. When

we project the breed improvement projects into the future we can see that new "strategic" research problems will soon be coming to the fore, problems that arise directly from the success of genetic improvement itself. One of the most important of these problems is the impending conflict between genetic development and genetic conservation.

The development and worldwide dissemination of new aquaculture breeds is likely to be accompanied by a rapid decline in the genetic diversity of wild and domesticated stocks.

The development and worldwide dissemination of new aquaculture breeds is likely to be accompanied by a rapid decline in the genetic diversity of wild and domesticated stocks. We can predict this decline both by analysing the technical nature of many of the current breed improvement programmes and also by historical analogy. The ongoing "Green Revolution" in agriculture has greatly diminished the genetic biodiversity of domesticated land plants and animals. A comparable genetic revolution in aquaculture is about to begin.

It is essential to foresee, and if possible forestall, a major loss of aquatic genetic resources. It will not, however, be easy to integrate genetic conservation with the equally important goal of genetic progress. Breed improvement programmes threaten the genetic integrity of native populations by genetic contamination, and threaten the very survival of domesticated breeds by competitive economic replacement ("genetic erosion"). In Western countries including Canada, Norway, the UK and the USA, the conflict between aquaculture and genetic conservation is a political issue that has the potential to block completely the future expansion of salmonid aquaculture. It will soon become an issue in Africa (especially with tilapia) and Asia (especially with carp).

The time has now come when new strains of fish and shellfish are also needed, and needed urgently, to meet the demand for increased food production in developing countries.

The objective of genetic conservation *must* be made consistent with the objective of genetic improvement. The Green Revolution in agriculture has been an extraordinary achievement. The time has now come when new strains of fish and shellfish are also needed, and needed urgently, to meet the demand for increased food production in developing countries. The conflict between this objective and the need to conserve existing biodiversity is a problem that is global in geographical extent and multi-agency in its implications for development assistance.

Dalhousie's Future in Asian Genetics

AGNA is currently coordinated from Dalhousie University in Canada, but the future course of AGNA is currently under review. A new IDRC aquaculture genetic programmes should build upon the best features of AGNA, but should be extended so that it will deal with challenges that are global and not limited to SE Asia or any single research methodology.

Will Dalhousie remain formally associated with AGNA in the future? That is rather hard to say. Dalhousie cannot be part of AGNA's critical mass for the simple reason that Dalhousie is not a located in a

developing country. Dalhousie can, however, usefully contribute to the development of AGNA in two areas: the rapidly developing areas of molecular, population and quantitative genetics; and interdisciplinary approaches to scientific/social issues.

In the first area, molecular genetics, Dalhousie's role would be to facilitate access to modern high technology. The new biotechnology is so powerful that access to it is almost synonymous with access to the future, in aquaculture genetics as in most areas of biological research. Scientists and science administrators in developing countries know this. The difficulty for IDRC (and other aid agencies) will be to transfer this technology in a way that focuses on applied research questions that are truly in the national interest. Unfortunately, this type of research at Dalhousie is funded to an increasing extent by agencies that have little interest in international development, and indeed might be opposed to it for competitive reasons. If it is desired to have Dalhousie contribute to development of modern genetics in Asia, some level of direct support (e.g. from IDRC) will certainly be needed to keep Dalhousie research in molecular genetics relevant and available to developing countries.

Unfortunately, this type of research at Dalhousie is funded to an increasing extent by agencies that have little interest in international development.

In the second area, the social, economic and genetic effects of modern aquaculture genetics, Dalhousie's role can be to help develop tools for *policy-making*. Economic, social and genetic considerations will have to be incorporated into a multi-objective decision system for the optimal development and conservation of aquaculture genetic resources. In undertaking this type of research collaboration in Asia, Dalhousie can no longer focus solely on the genetic technology itself. Researchers in the fields of economics, genetics and sociology will have to be involved at all future stages of programme formulation and implementation.

Part II. Selective Diversification of Aquaculture Stocks: A Proposal for Economically Sustainable Genetic Conservation¹

by R.W. Doyle, N.L. Shackel, and A.J. Talbot

The genetic diversity of aquaculture stocks can be maintained, and their genetic impact on wild stocks minimized, by breeding programmes that deliberately generate genetic diversity. Current animal breeding practices are likely to reduce the diversity of domestic stocks if they are extended to aquaculture. It is proposed that national breeding programmes for aquaculture should, instead, try to develop numerous breeds especially adapted to local environments and aquaculture systems.

The genetic diversity of aquaculture stocks can be maintained, and their genetic impact on wild stocks minimized, by breeding programmes that deliberately generate genetic diversity.

¹ This paper forms parts of the Proceedings of the Ecological and Genetic Implications of Fish Introductions Symposium (FIN) convened at the Great Lakes Institute, University of Windsor, Ontario, Canada, May 17-19, 1990.

An economic model is presented of decision-making by individual farmers who, in choosing which breed to produce, determine the "fitness" of the breeds in a meta-population that includes all breeds. As long as strong genotype-environment interaction for production traits is maintained by artificial selection, the economic self-interest of farmers should ensure the stability of genetic polymorphisms among breeds. Genetic variation would be conserved (in the among-breed component of genetic diversity) but not the primordial distribution of gene and genotype frequencies. Economic benefits to farmers, plus a high return on investment at the national or supra-national level, makes breed diversification an attractive conservation strategy even though it is admittedly a compromise from a purely genetic viewpoint.

The stock-improvement activities of animal breeders have drastically reduced the gene pool diversity of domestic animals during this century.

The stock-improvement activities of animal breeders have drastically reduced the gene pool diversity of domestic animals during this century. The stock-improvement activities of animal breeders have drastically reduced the gene pool diversity of domestic animals during this century (Alderson 1989; Oldfield 1989). Similar losses in aquaculture are likely to lead to problems in the future when the genetic diversity of cultivated stocks has become a major component of the total diversity of intensively cultivated species. The thesis of this paper is that diversity could be maintained, and the adaptive flexibility of surviving wild populations might be conserved or enhanced, by adopting a genetic improvement strategy for aquaculture that differs from the usual strategies of animal breeders. The strategy proposed here is the *active generation* of genetic diversity among newly domesticated stocks. Our suggestion is that national aquaculture breeding programmes should, from their outset, develop a large number of breeds specially adapted to local environmental conditions and farming systems. It will be shown below that a diversity-generating programme can be economically advantageous to the individual farmer, and therefore should complement, rather than oppose, the worldwide acceleration of aquaculture production.

The proposal to actively generate genetic diversity in a national breeding programme is by no means unprecedented.

The proposal to actively generate genetic diversity in a national breeding programme is by no means unprecedented. Land (1981) recognized the need to develop, not merely conserve, genetic flexibility in domestic animals and proposed that national breeding programmes should include selective diversification among their breeding objectives. Similar recommendations were made by Smith (1985) who examined the effect of unpredictable changes in consumer preference, economic conditions and husbandry techniques of the genetic improvement of farm animals. The conclusion of Smith's economic analysis was that the long term interest of the agriculture community would be best served by the development of many biologically divergent breeds — on the order of 50 — as a hedge against uncertainty. Fifty seems unrealistically high for aquaculture until one considers that in just one country, Thailand, there are more than 15 government fisheries stations that produce fish "seed", and that could easily undertake small-scale strain development programmes.

From the perspective of a geneticist, the key feature of a genetic improvement strategy that promotes diversification is the attitude of the breeder towards genotype-environment (GE) interaction. Genotype-environment interaction occurs when the relative performance of genotypes or breeds varies among environments (Falconer 1981). It is generally assumed that GE interaction is of little practical importance if it is too small to alter the relative ranking of genotypes (weak GE interaction) in different environments (Baker 1988; Gregorius and Namkoong 1986; Westcott 1986). Our proposal, however, is to generate and maintain *strong*, or rank-changing, GE interaction among aquaculture breeds specialized for various aquaculture systems, habitats and geographical locations. The objective is to develop a suite of breeds, each of which is superior to all other breeds in at least one environment that is commercially, sociologically or politically important. A genetic diversification policy for aquaculture thus differs substantially from the majority of breeding programmes involving farm animals.

A genetic diversification policy for aquaculture thus differs substantially from the majority of breeding programmes involving farm animals.

Conventional Animal Breeding Programmes Lead to the Loss of Genetic Diversity

The usual policy of scientific animal breeders has been to increase the potential yield, or other desirable traits, of a herd as quickly as possible, and to modify both the genetics and the environment of the herd as much as is required to do so. The result has been a drastic reduction in the genetic diversity of domesticated animals (Oldfield 1989; Alderson 1989). Of the many examples of such losses given by Alderson, one is quoted here at length because of its direct relevance to the future development of aquaculture (Alderson 1989, p. 7):

At the beginning of this century Norway possessed about twenty breeds of cattle. By 1959 only seven recognized breeds remained, with the NRF (Norsk Rodtfe) making up about 30% of the national herd. This herd was then chosen as the medium for implementing government breeding policies, and breeders were encouraged and advised to use NRF bulls. The result is that 98% of the cattle in Norway are now of NRF type. It is frightening to consider both the speed of this process and the overwhelming effect of an imposed policy with government support. In the 1960s a series of breeds were carried away in the torrent of amalgamation with the NRF — the Rodt Tronderfe in 1960, the Raukolle in 1961, the Dole in 1963, and the SVF (Sor og Vestlansfe) in 1968. Only two breeds have so far resisted total capitulation, but both are on the verge of extinction: the Telemark is a mountain breed noted for its longevity, hardiness and the thriftiness; the Sidet Tronderfe is a polled breed found in northern Norway. In 1984 it was recommended that Nordic Gene Bank Committee should be formed, including all the Scandinavian countries, but it is

doubtful that these breeds can be saved unless there is a swift and dramatic change in policy.

Alderson's example is important because Norway is a recognized leader in the application of modern breeding practices to aquaculture on a national scale. It is not surprising that the Norwegian breeding programme for Atlantic salmon under-taken by the Institute of Aquaculture Research (Akvaforsk), as described by Gjedrem et al. (1988), is following a course parallel to that of the Norwegian cattle industry. Dr. Gjedrem estimates that currently about 70% of the Atlantic salmon farmed in Norway come from the selected Akvaforsk breed (personal communication 1990).

The centralized genetic programme of Akvaforsk is a widely respected model for the future development of an aquaculture broodstock industry based on conventional animal breeding practices.

The policy of programmes like that of Akvaforsk is to minimize or ignore GE interaction whenever it is "weak" and does not significantly hinder the response to selection. The selection ideal is a single, all-purpose breed that increases yield across the range of commercial environments. The centralized genetic programme of Akvaforsk is a widely respected model for the future development of an aquaculture broodstock industry based on conventional animal breeding practices.

A Diversification Programme for Aquaculture Genetic Improvement

Fisheries biologists and conservationists tend to distrust both the logic and the optimism of the animal breeders.

Fisheries biologists and conservationists tend to distrust both the logic and the optimism of the animal breeders. They find themselves at a disadvantage, however, because their position is often seen as obstructive. It is easy to show that improved aquaculture stocks and increased aquaculture production are genuinely needed, and needed with increasing urgency, as natural fish stocks become exploited to the point of collapse (FAO 1989). This conflict between genetic conservation and commercial development in aquaculture again finds its parallel in animal husbandry (Alderson 19089, p. 105):

The philosophy of genetic conservation . . . is based on the apparently negative concept of maintaining the status quo, and that is what is so difficult for many scientists and livestock breeders to understand. The idea is alien to the general tenets of livestock production, and conflict between the principle of conserving genetic variability and the instinctive urge to improve — or more accurately to change — is an accepted feature of the conservation of rare breeds.

To try to resolve this conflict we propose a *diversification* policy for aquaculture genetic improvement at the national level. In a later section we outline evidence that breeds generated in such programmes might change rapidly under selection for increased yield for their particular environments. The evolving ensemble of specialized breeds would constitute a reservoir of genetic diversity that more closely resembles

the ancient "crop gene centres" (Oldfield 1989) than it does the untouchable genetic reservoir of a gene bank. (Crop gene centres are the geographically localized origins of primitive cultivars or breeds of domestic plants and animals.) Diversity would be conserved in these modern analogues to the crop gene centres, but not their "primitiveness," as the population would be under intense selection both within and between breeds. Selective diversification is a compromise between the need to reconcile the indisputable need for increased aquaculture production with the need for genetic conservation. Genetic variation is conserved, but not the status quo, i.e., the primordial distribution of gene and genotype frequencies.

Considered as a group or "gene centre," the breeds should evolve towards the domesticated condition if there is occasional genetic interchange among them, by analogy with the predictions of Wright's shifting-balance theory for natural populations (Crow et al. 1990). The among-breed components of diversity in the domesticated "metapopulation" (Olivieri et al. 1990) should remain high both for neutral alleles and those affecting fitness. The breeds will not evolve towards genetic uniformity unless two conditions are met: (a) a single genotype becomes superior in all environments (Gillespie and Turelli 1989), and (b) all farmers select, i.e. choose to cultivate, that genotype. In our economic model (see below) farmers are assumed to select both within and among breeds on the basis of economic self-interest.

Maintenance of strong GE interaction in a diversification programme is the key to the success of the long-term conservation strategy. Genetic interchange (e.g. escapes or deliberate hybridization) may produce breeds that do well in several environments. Hybridization may increase the overall rate of domestication of the aquaculture metapopulation, but should be associated with continuing selection aimed at maintaining strong GE interaction among the breeds. While strong GE interaction is maintained by artificial selection there is no tendency towards the homozygosity, or isogenicity, that has greatly increased the sensitivity of terrestrial crops and animals to disease, insects and climatic stress (Plucknett and Smith 1982; Alderson 1989) — and which is so worrisome to those concerned with the genetic impact of aquaculture.

Our proposed diversification strategy is clearly inconsistent with proposals to conserve genetic diversity by minimizing evolutionary changes in domesticated populations (Allendorf and Ryman 1987). Genetic conservation follows, instead, from the inherent stability of fitness polymorphisms that generate strong GE interactions in a heterogeneous environment (Gillespie and Turelli 1989). Fitness in the heterogeneous domestic environment depends on the willingness of farmers, firstly, to use breeds that are specialized for their particular environment, and secondly to maintain the environmental heterogeneity itself (i.e., the diversity of farming systems). This willingness will depend on the financial benefits an individual farmer can expect from using the specialized breeds.

Maintenance of strong GE interaction in a diversification programme is the key to the success of the long-term conservation strategy.

Is the Attainment of Strong GE Interaction a Feasible Objective?

A genetic diversification programme would have as its objective the generation of strong GE interaction among breeds, whether or not such interaction is present in the founder breed or breeds. The biological properties of breeds will diverge under selection when fitness — i.e. commercial performance — involves different, but genetically correlated, heritable traits in contrasting environments. In general, the direct response of each breed to selection in its own environment will be greater than its correlated response in other environments, so selection in both environments (given sufficient genetic variance) will result in strong GE interaction — eventually. The rate of breed divergence will depend on the intensity of selection in each environment and the genetic variances and correlations of traits within the between environments (e.g. Rosielle and Hamblin 1981).

Whether disruptive selection can in practice produce strong GE interaction in aquaculture is a question that can only be answered experimentally.

Whether disruptive selection can in practice produce strong GE interaction in aquaculture is a question that can only be answered experimentally. The available evidence comes mostly from comparison between natural and aquaculture systems rather than between types of domestic environment. Breeds of fish adapted to high-input aquaculture tend to do less well than other breeds when tested in less intensively managed environments and *vice versa* (Fraser 1981; Doyle and Talbot 1986; Chilcote et al. 1986; Hjort and Achreck 1982). Genotype-environment interactions involving different types of domestic environment have been demonstrated in common carp (Wohlfarth et al. 1986) and catfish (Dunham et al. 1990). GE interaction between *C. carpio* breeds specialized for artisanal and intensive cultivation is well documented (Wohlfarth et al. 1986). There is growing evidence of GE interaction among tilapia breeds grown in the Philippines on high and low quality feeds (Romana and Doyle, unpubl. data) and on farms in Thailand (Uraivan 1990). The environments in which fish are cultivated are at least as varied as those experienced by crop plants. In SE Asia, for example, they range from rain-fed rice fields, to manured ponds, to intensively managed ponds, cages and concrete raceways receiving pelleted feed (Brown 1983).

The adaptation of fish other than common carp (Wohlfarth et al. 1986) to the diversity of artificial environments is just beginning.

The adaptation of fish other than common carp (Wohlfarth et al. 1986) to the diversity of artificial environments is just beginning and represents a period of rapid evolution under intense environmental stress (Kohane and Parsons 1988). As in the case of domestic land animals (Price 1984), the domestication of fish is likely to involve feeding and social behaviour (Suboski and Templeton 1989). High intensity cultivation selects for less competitive and less reactive fish (Doyle and Talbot 1986), and increased tameness of domesticated stocks has already been noticed (Moyle 1969, Gjedrem et al. 1988). Behavioural requirements for successful foraging and predator avoidance will differ widely between intensively cultivated ponds and artisanal environments such as rice fields. It is clear that considerable variation exists in both

the aquaculture environments and in the phenotypic response to these environments — i.e., there is considerable "opportunity for selection" (Downhower et al. 1987). We therefore suggest that strong GE interaction can probably be achieved when a natural population or primitive breed is selected in two or more dissimilar environments.

Example of a Genetic Improvement Programme Based on Diversification and Strong GE Interaction

A genetic stock improvement programme based on diversification would attempt to develop specialized breeds, probably through artificial selection. There is as yet no well-documented example of such a programme so we offer a purely hypothetical illustration (Figure 1). In this illustration, selection carried out in low- and high-input environments has generated specialist breeds that rank differently at opposite environmental extremes (Moav et al. 1976). The environments in Figure 1 are characterized by their "input" of feed, labour, electricity etc., and the breeds are characterized by their production functions, i.e. their characteristic yield in each environment. The hypothetical environments are differentiated on a scale of "input intensity" which can be interpreted in economic terms, rather than an environmental variable like temperature where economic parameterization would be more indirect and dependent on particular circumstances.

A genetic stock improvement programme based on diversification would attempt to develop specialized breeds, probably through artificial selection.

The hypothetical production function for the three breeds shown in Figure 1, A (artisanal), H (high input) and F (founder) is

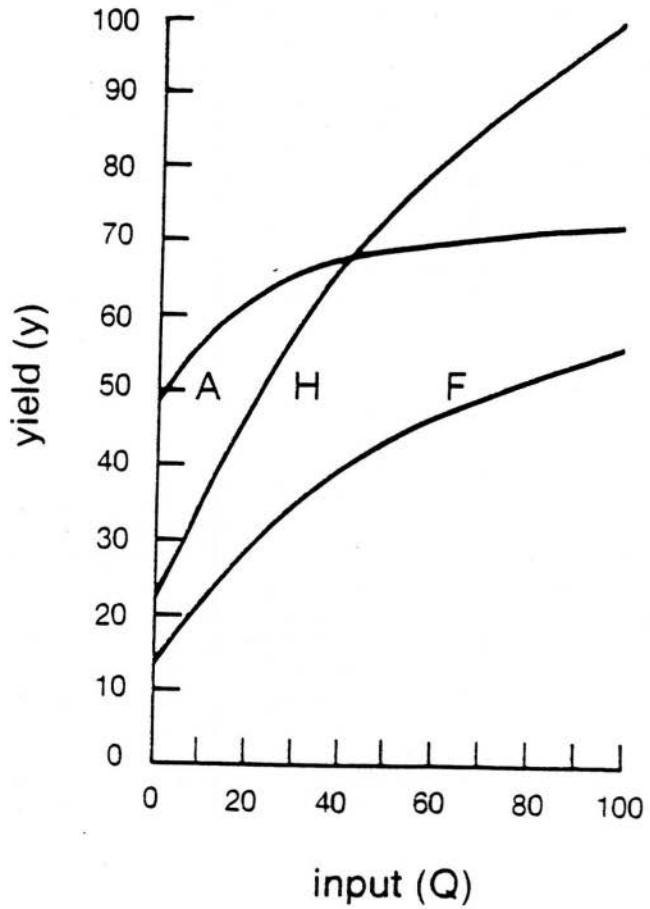
$$(1) Y_i = \frac{I}{a_i + \frac{b_i}{g + Q_i}}$$

a rectangular hyperbola. The variable Y_i = yield of the i th breed where $i = A, H$ or F ; the variable Q_i = variable inputs such as feed, "seed," electricity and labour. The parameter a_i measures (approximately) the energy accumulation rate of the i th breed at saturating inputs, and b_i reflects assimilation efficiency at lower inputs. The origin-translation parameter g represents fixed inputs common to both breeds that are not included in the model. The true form of production functions that relate the yield of aquaculture stocks to variable inputs of feed, labour, electricity etc. is unknown. We chose (1) for simulation because curves of this, or similar, mathematical form have proven useful for empirical analysis of many types of biological dose-response data (Ratkowsky 1983; Causton 1977).

FIGURE 1

Yields of specialized artisanal (A) and high-input (H) breeds generated by selecting a founder breed (F) in two aquaculture environments.

The abscissa and ordinate are arbitrarily scaled to 100 units of input and yield, respectively.



Relationship Between Genetic Diversification, Economics and Social Development Policy

The early phase of the Green Revolution in field crops perfectly illustrates how modern breeding policies can reduce genetic diversity (in that case the diversity of crop cultivars). The newly developed, input-responsive varieties of wheat, maize and rice are sometimes said to yield as much as, or even somewhat more than, traditional cultivars under inferior conditions (Plucknett and Smith 1982) — typical weak GE interaction that has had enormous impact both on genetic diversity and human society despite being "weak." To achieve the high yields of which only the new varieties are capable, intensive cultivation has replaced traditional farming practices in many rural communities, often to the detriment of the poorer members of these communities (Castillo 1975). In reaction to the socioeconomic side effects of the Green Revolution, international crop research programmes are now developing varieties specialized for low inputs and marginal conditions (Oasa 1987). The surviving primitive cultivars constitute an important resource base for these genetic diversification programmes. There is now a growing concern that the genetic engineering of farm animals may renew the socioeconomic assault of modern genetics on small farms even in developed countries (Lesser 1990).

The distinguishing feature of the Green Revolution in field crop production has been synergy between the development of new varieties, increased use of fertilizers and pesticides, and rigorous monoculture. One might suppose that a similar course will be followed in aquaculture by programmes based on conventional animal breeding procedures if a single breed becomes increasingly adapted to (i.e., responsive to) technologically sophisticated management practices.

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Assuming that the diversification simulated in Figure 1 can be achieved, some of its socioeconomic consequences are explored in Figure 2 and 3. To do this it is necessary to translate the biological differences among the breeds into economic terms. The analyses of Land (1981) and Smith (1985) dealt with the economic advantages of diversification for the farming community as a whole. We will be more concerned with the decisions of individual farmers, who in effect determine the fitness of the breeds and therefore the long-term stability of the genetic polymorphisms (assuming informed, free choice by the farmers).

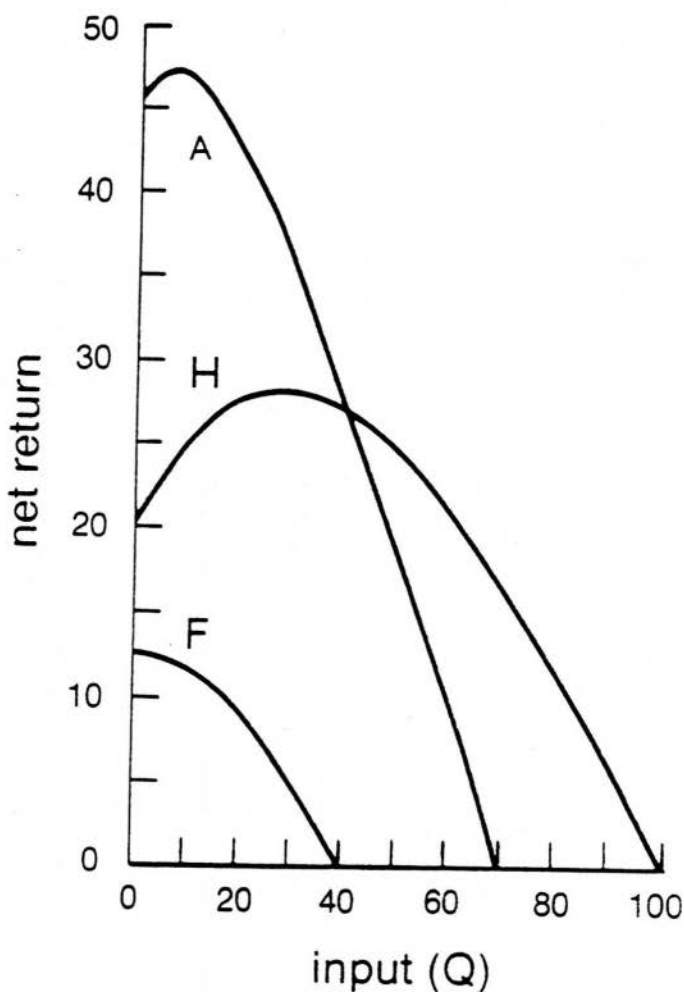
Figure 2 shows the hypothetical net return (revenue — costs, or $Y_i - mQ_i$) achieved by farmers who grow the A, H and F breeds at constant costs and prices. The axes in this figure are scaled relative to the axes in Figure 1 so that m , the cost/unit input, = cost/unit yield = 1.0. It is more profitable for an individual farmer to grow the artisanal breed at about 4 input units than either the H or the founder breed at any level of input. There is no financial incentive to switch from cultivation of the artisanal breed, within the range of Q shown here, despite the considerably higher yield of the latter under intensive cultivation. The

relative net return from artisanal and high-intensity cultivation depends on the parameter values used in the model, but the qualitative conclusion (breed A is more profitable than H over some range of Q) holds whenever strong GE interaction exists.

FIGURE 2

Hypothetical net return ($Y_i - Q_i$) from the artisanal (A), high-input (H) and founder (F) breeds.

The scaling of the axes is arbitrary (see text).



It appears that if specialized artisanal breeds can be developed, they can resist competitive displacement by high-input breeds under certain genetic and economic conditions. The most relevant external economic variable is probably the cost of input, m , expressed relative to the value of the yield. Substitution in Eqn. 1 followed by simplification yields

$$(2) \quad Y_i = \frac{C_i + gm}{a_i (C_i + gm) + b_i m}$$

which is solved for C_i , the cost of generating yield Y_i .

$$(3) \quad C_i = -m(Y_i (a_i g + b_i) - g) / (a_i Y_i - 1)$$

Figure 3 shows the effect of variable input costs on the net return from whichever improved breed (A or H) generates the higher net return from a given input (Q). It is assumed that the farmer will choose the best available breed of each cost-input combination. The switch from the artisanal to high-input breed occurs at about 40 input units (visible as a bump in the isoclines in Figure 3). Yield is calculated from Eqn. 1; variable cost from Eqn. 3. The input level (Q) and choice of breed (A or H) are the decision variables available to the farmer in Figure 3. When the unit input cost, m , exceeds approximately 0.8, low input aquaculture with breed A generates the absolute maximum net return. In other words, when variable costs are high the artisanal breed may be absolutely resistant to competitive displacement. When costs are lower than about 0.5, breed H provides the higher absolute net return. However, use of the artisanal breed with low input remains more profitable for farmers unwilling or unable to grow H with at least 40 input units or so.

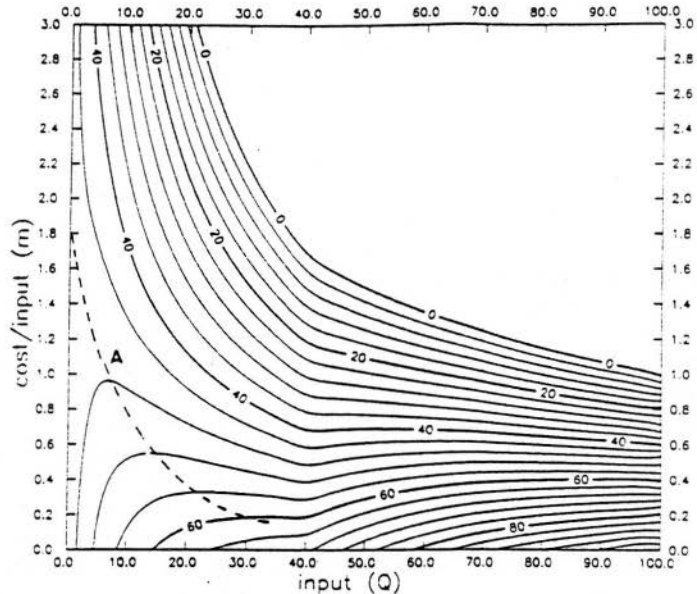
Under less severe economic conditions (lower m) the artisanal breed is still *relatively* stable, in that the farmer using breed H must add input above a threshold value to realize an increase in net returns. Note that the attractiveness of the artisanal breed increases rapidly as costs increase — *including the costs of externalities such as environmental pollution*. The conclusion is qualitatively robust for all parameter values that generate strong GE interaction.

It can be seen from Figure 2 and 3 that strong GE interaction among breeds specialized for different input levels increases their resistance to economic exclusion. Low-input cultivation of the specialist breed is economically preferable over a broad range of input costs (Figure 3). The overall objective of the selection programme, which is to increase aquaculture yield, is achieved, because both the artisanal and high-input breeds perform better than the founder strain in their respective aquaculture systems.

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FIGURE 3

Net return as a function of input and cost/input.



Isocline = net return calculated as in Figure 2. Farmers switch to whichever breed maximizes net return as input rises or falls (breed A below and breed H above approximately 40 input units). Dashed line (labeled A) = approximate locus of point of maximum net return from the artisanal breed. Where the input cost is so low that the high-input breed is superior at all input levels, the locus of maximum net income is the right-hand margin of the diagram.

Our socioeconomic perspective evidently reverses the priorities of conventional genetic improvement programmes.

Our socioeconomic perspective evidently reverses the priorities of conventional genetic improvement programmes. In crop breeding, as already mentioned, elimination of GE interaction is the usual objective (Crossa et al. 1989; Rognli 1987; Baker 1988; Rosielle and Hamblin 1981). (The parallel objective in aquaculture would be a variety of, say, tilapia, that shows improved performance in a range of Asian aquaculture systems.) We argue that if the usual animal breeding objectives are applied to aquaculture they are also likely to reduce both the genetic diversity of aquaculture stocks and the sociological diversity of aquaculture farming systems. A programme that deliberately selects for genetic diversity, on the other hand, could reduce the negative impact of modern aquaculture on both genetic and social diversity while maintaining a high rate of genetic gain. Indeed, selection that occurs at

both the individual and population level can be significantly more efficient than selection at either level along (Wade 1985). Selective diversification would also provide a short-term economic advantage to the individual farmer, which most genetic conservation proposals emphatically do not.

The economic simulation in Figure 2 and 3 suggests that the economic advantage of this breeding policy accrues to the consumer of the new breeds (i.e., to the farmer). The genetic diversification policy would appear to have little economic advantage to the breeder of specialized breeds, since the breeder sells to the farmer, and the market for any particular genotype would be comparatively small. The benefit to the breeder is negligible if the superiority of the breed is based on additive genetic variance and farmers multiply their own stock.

In this situation (where benefits accrue to the farmer or the ultimate consumer rather than the breeder) the organization of breeding programmes must come at the national or international level, rather than through the private investment of individual breeders (Smith 1978; Hill 1981). The specialized breeds must however be developed locally, perhaps through "farmer oriented" extension or research station activities utilizing reliable, small-scale genetic improvement procedures (e.g., Uraivan and Doyle 1986). The high return from investment in genetic improvement that benefits farmers, when investment takes place at the national or supra-national level (Smith 1978), makes the "aquaculture gene centre" an attractive conservation strategy. Although it is admittedly a compromise from a purely genetic point of view, it does go some way towards reconciling the opposed objectives of increased aquaculture production and genetic conservation.

The organization of breeding programmes must come at the national or international level, rather than through the private investment of individual breeders.

Acknowledgments

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6

FROM MOLLUSC CULTURE TOWARDS COASTAL RESOURCE RESEARCH

by Gary Newkirk

Introduction

The International Development Research Centre (IDRC) supports a number of small-scale aquaculture projects in a variety of developing countries. Some of these projects involve working with indigenous species of molluscs (oysters, mussels and clams). The main purpose of these mollusc-related projects is to develop and improve culture methods and to establish, or re-establish, their aquaculture — thereby helping to provide food or income for the rural poor.

The Biology Department of Dalhousie University has been assisting IDRC in the development of its mollusc culture projects for over a decade. This assistance began by the training of graduate students at Dalhousie from developing countries, in mollusc culture research and technical training for project people. It was later expanded with the creation of a "Mollusc Culture Network." This network, also managed by the Department, was formed to coordinate the mollusc culture projects supported by IDRC - facilitating the flow of information, technology and expertise among the projects and thereby strengthening each project. The network is global in scope: mollusc culture projects in such diverse nations as Indonesia, Jamaica and the Sudan have been linked through the process.

The Biology Department of Dalhousie University has been assisting IDRC in the development of its mollusc culture projects for over a decade.

The Mollusc Culture Network at Dalhousie raises a number of issues pertinent to a university's possible contribution to development processes. To address and discuss these issues is the primary purpose of this chapter. To this end, the chapter will be divided into four main sections. A brief discussion of the history of the Mollusc Culture Network, the Network as it currently exists, a critique of the results of the Network and finally a discussion of some of the lessons learned from the experience.

History of the Mollusc Culture Network

The Mollusc Culture Network slowly evolved from the involvement of Dalhousie in a few loosely-linked development initiatives, sponsored by IDRC, to a more structured effort by the two institutions to coordinate the many mollusc culture projects sponsored by IDRC.

The first involvement of the Biology Department (in IDRC sponsored mollusc culture projects) started in the late 1970's, with two students coming from the Sudan for MSc programs. These students were involved in an IDRC supported project with the Agriculture Research Corporation of Sudan and did all of their research work in Nova Scotia, working on research problems of the local mussel and oyster culture industries. They took the skills gained at Dalhousie back to their homeland, where they applied them to the local problems of oyster culture.

"Hands-on" approach to training and teaching, much of the course participants' time was spent in the field, linking up with the local industry involved in mollusc cultivation, as well as with local institutions involved in research and development of molluscs.

Dalhousie was subsequently invited to host a training course on basic culture techniques and research methodology for participants from a number of IDRC supported projects. This led to a course in Halifax during the summer of 1982 and a repeat exercise during the summer of 1983. In all, twenty-seven students attended. Much of the training was provided by Dr. D. B. Quayle, a retired scientist from the Department of Fisheries and Oceans, who worked with IDRC and monitored their mollusc culture projects. Quayle worked with Gary Newkirk, then a research associate at Dalhousie, who coordinated the courses. As both Quayle and Newkirk favored a "hands-on" approach to training and teaching, much of the course participants' time was spent in the field, linking up with the local industry involved in mollusc cultivation, as well as with local institutions involved in research and development of molluscs. After 1983 the courses were discontinued -- in part because fewer new mollusc culture projects were being supported by IDRC and in part due to a view that such training courses would be better taught in a tropical setting, where the environmental and technical features might be more similar to those encountered by the students in their home situations.

The relationship between IDRC and Dalhousie in mollusc culture did not end in 1983. As a result of the contacts made with the original Sudanese students who had taken their MSc's at Dalhousie, IDRC asked Newkirk to visit Sudan to advise the IDRC supported oyster culture project in that country, a relationship which Newkirk has maintained with (approximately) yearly visits to the Sudan.

Newkirk, a research associate at the start of his IDRC involvement, was later appointed as an Assistant Professor (Research) with most of his

salary paid from external grants and contracts. This made it possible for him to visit other IDRC supported mollusc culture projects, enabling Quayle to reduce his travel commitments which were proving too rigorous. By the late 1980's, Newkirk was monitoring on a regular basis 3 mollusc culture projects in Latin America, 2 projects in Africa, 1 in the Caribbean and 2 in Asia. Travel to such far-flung projects accounted for some 100 days per year of Newkirk's time.

In January, 1989, a grant was provided by IDRC to Dalhousie University to fund a formal Mollusc Culture Network to promote effective interaction among the IDRC projects. Newkirk was given the task of coordinating the Network and a half-time administrative assistant was hired to support this work.

The Mollusc Culture Network Today

There are seven specific objectives of the Mollusc Culture Network. These are:

- to support the network projects with methodological advice, guidance, access to information and general encouragement;
- to provide scientific leadership to the projects and to work with other national, regional and international agencies involved in mollusc culture; to promote the Network itself and the general concept of small-scale fisher/farmer involvement;
- to monitor the mollusc culture projects in the Network and to report to both the project leaders and IDRC;
- to publish and distribute a semi-annual newsletter, "Out of the Shell", for the benefit of project participants and other interested institutions in developing countries;
- to improve scientific expertise of Network project participants by providing short-term training, by supervising degree training of IDRC-supported scientists at Dalhousie University and by developing training materials for formal and informal training in mollusc culture;
- to organize meetings and workshops for Network participants; and
- to encourage the involvement of Canadian expertise in Network projects.

To provide scientific leadership to the projects and to work with other national, regional and international agencies involved in mollusc culture.

Two main features of the Mollusc Culture Network make it unique compared to other IDRC sponsored initiatives:

- (1) the Mollusc Culture Network is managed by a Canadian university department; and
- (2) the Network is global, not regional, in scope.

A Critique of the Network

The "technology lead" may be justified in some cases, however, in the case of the Mollusc Culture Network projects a "needs focused" approach was probably more appropriate. It has since become apparent that a more holistic approach is desirable.

The mollusc culture projects were independently conceived and there has been from the beginning an emphasis on biological and technical aspects. The Network was later established to support these projects and, it also was primarily biological and technical in emphasis. The "technology lead" may be justified in some cases as long as it is employed consciously and purposefully. However, in the case of the Mollusc Culture Network projects a "needs focused" approach was probably more appropriate. It has since become apparent that a more holistic approach is desirable — with more attention placed on the intended impact of the projects on coastal communities.

IDRC has provided opportunities for Canadian scientists to participate in tropical research and to contribute to the building of research capacity in the institutions of developing countries. Despite Dalhousie University being the home of people of numerous disciplines, the Network has not effectively linked into them, although effort is now being made to do so. In particular there has not been enough progress in making linkages with social scientists at Dalhousie, although progress is being made in some of the developing countries involved. Time constraints and the balkanizing of university faculties and departments have limited the contacts on the Dalhousie campus. It seems to be difficult to forge interdisciplinary links in Canada among technical and social science interests in practical problems in developing countries which are so far from home. One of the problems is identifying research agendas that will attract the interest of the Canadian academic and will be compatible with the research agenda of the developing country, the latter being of first priority in development projects.

The work-programme approach to the coordination of the Network has necessitated a substantial time away from Dalhousie by the coordinator. This has obviously made it hard to perform a 'normal' university role and to relate to the 'normal' university routine. The university system, and that of IDRC, has proven responsive in this case but there has been relatively little direct Dalhousie support. Only 20% of Newkirk's salary

is paid by Dalhousie on a 3-year contractual basis; the long term continuity of the project is questionable.

Nevertheless, Newkirk has been able to include development project activity (as described here) with graduate student supervision and some teaching. The integration of project work and graduate student supervision has been successful as most of the students come from Network projects and their research is carried out in their home country. Linkage between project work and teaching has been less successful, in part because of the technical nature of the courses. Over the last 10 years there have been 8 MSc and 1 PhD students from Network projects and 4 others from closely related projects in developing countries under Newkirk's supervision.

The integration of project work and graduate student supervision has been successful as most of the students come from Network projects and their research is carried out in their home country.

Lessons Learned

A methodology for a specific technology cannot be developed without input of the target group from the start of the project; moreover, objectives cannot really be developed without consideration of the social and economic context within which the development is to occur. Any sustainable approach to improving livelihood options for poor coastal communities must involve participatory methodologies. This lesson is being brought home in several of the mollusc research projects where technology up take has been slow. In response, efforts are being made to emphasize participatory research at the local level. Since the institutions of most developing countries have tended not to use such approaches, IDRC and the Network are developing training to support such approaches in the Network projects. To make aquaculture development more appropriate for the multi-occupational nature of poor coastal residents, the Network is now striving to include more species as well as to involve natural and social scientists together with Canadian expertise.

Cultural and institutional differences between the developing countries and Canada have led to different expectations as to professional rewards. Whereas Canadian scientists measure success substantially in terms of publications, many scientists in developing countries face harsh financial constraints, hence they place great value on contract projects that bring in foreign currency and honoraria. The publication goal is consequently a lower priority and, thus, the quality of research suffers as well.

One of the major concerns in developing and participating in collaborative research with a developing country is that the research agenda not be determined by the Canadian partner(s).

One of the major concerns in developing and participating in collaborative research with a developing country is that the research agenda not be determined by the Canadian partner(s). In most cases there will be a great difference in the training and experience in research between the Canadian and developing country scientists. It is all too common for the developing country scientist to defer to the opinion of the foreign "expert" in the design of research. This will even occur in the very basic exercise of defining the problem! This concern is in the forefront as new Network projects are now developed.

The model of a university professor involved in teaching developing country students (graduate and short courses), research in projects and project management has not been fully realized. However, some important aspects, particularly graduate student training, project monitoring and advising and Network coordination have been successfully balanced.

Project orientation has similarly shifted towards more interdisciplinary and user-oriented approaches.

Partly in response to philosophical changes and partly to budget cuts, IDRC has recently reorganized and integrated many social scientists with the agricultural and technical staff. Project orientation has similarly shifted towards more interdisciplinary and user-oriented approaches. This same shift has been underway in the Mollusc Culture Network for several years and, indeed, the name of the Network is being altered to reflect the broadening approach. It is to be called the Coastal Resources Research Network.

Further Reading

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PART III

**ECONOMIC DEVELOPMENT AND
PUBLIC ADMINISTRATION**

Introduction

by Alasdair Sinclair

What relevance does modern economics have for policy making in developed economies? Some, who flip through an economics journal and see a complex mathematical treatment of an esoteric subject, may be inclined to the view that modern economics is not relevant to anyone, let alone a developing country. This would be a great mistake. The difference between good economic policy and bad economic policy has major implications for health, jobs, life expectancy, literacy, environmental standards and almost all social and economic aspects of life that one can think of. Dalhousie University's involvement in programs to improve public administration, broadly conceived, is predicated on the understanding that economic policy matters a great deal.

Part of the confusion about the role of economics in developing countries stems from a failure to distinguish between what Arnold Harberger calls the "profession of economics" and the "science of economics"¹.

"I distinguish the profession from the science of economics by analogy to medicine. The profession of medicine is what is taught in medical school, what doctors use in their actual practice. In contrast, the science of medicine has its cutting edge in the work of medical researchers extending the frontiers of knowledge. The situation is similar in the practice of professional economics. Where economic scientists extend the frontiers, practitioners ideally embody the corpus of knowledge and experience inherited from the past. The scientist's interest lies in what was not known even five or ten years ago, whereas the bread and butter of the professional's work lies in applying what has for the most part been known for decades."

In its development related work, the Department of Economics is geared to the professional side of economics as opposed to the science side. The challenge is to choose from the wide body of economic knowledge those parts that are relevant and useful in the day to day management of a particular country or group of countries. This choice is not without controversy, but it is challenging and important work, and, when conscientiously undertaken, it can provide mutual benefits to the host country and to the University. Examples of programs in which training in public administration, including economic policy formulation, plays a key role, are highlighted in this section.

¹ Arnold C. Harberger, in *The Open Economy*, R. Dornbusch & F. Helmets, eds., Oxford University Press, 1988, p. 254.

7

CANADIAN AID FOR THE TRAINING OF PUBLIC SERVANTS IN GHANA AND ZIMBABWE

by Ian McAllister

Preface

The two projects, embodied in this chapter, spanned a decade — from initial meetings in Ghana in 1975 through to the completion of the final training course in Zimbabwe in 1984. The paper was written in 1987 — adequate time for some reflection, but still close enough to the events for a recollection of details, in addition to those recorded in routine documentation. It has not been subsequently revised, however an annex has been appended in which a sample of 'post-project benefits' is provided.

Summary

The Canadian International Development Agency has co-sponsored a number of training programmes for public servants. In this article two of the largest programmes are examined, one with the Government of Ghana, the other with Zimbabwe. The main work with Ghana was undertaken in that country; much of the work with Zimbabwe was undertaken in Canada — for different reasons and with somewhat different results. Over 400 officials have completed the basic courses (generally of 3 months duration). Others have attended shorter courses, training-of-trainers projects, and a workshop for cabinet ministers. In this paper questions are explored about the relevance of such training, the nature of the content and ways to evaluate such activities. Practical issues of aid planning and implementation are raised and, finally, questions of aid targets are examined in the light of the experiences of these programmes.

Programmes are examined, one with the Government of Ghana, the other with Zimbabwe.

Introduction

The Canadian International Development Agency¹ has co-sponsored a number of public administration training programmes with the governments of developing nations.² Two of the larger ones have been for middle-ranking public servants of Ghana (between 1976 and 1981) and Zimbabwe (between 1980 and 1984). In this paper, experiences from those two programmes are recounted, using the broad framework of the project cycle (Baum, 1970).

Canadian Aid to Ghana and Zimbabwe

It should be noted at the outset that neither of these training programmes was the product of any 'mainstream aid philosophy' that could be viewed as central to CIDA's aid programming. As for most other donor nations, Canadian bilateral aid has been dominated by the provision of goods (made in Canada) and of food (grown in Canada). Canadian overseas development assistance (ODA) has also been buffeted by sometimes conflicting pressures. These have included trade promotion, humanitarian ideals, regional interests, broad security considerations, the Commonwealth and French connections, the influence of the US neighbour and technological ambitions (as for the sale of nuclear reactors). 'Grand theories' have also served as reference points. Unbalanced growth (endorsing large projects, such as hydro-power dams that might spell markets for Canadian-made turbines), green revolutions (with scope for Canadian farm equipment), rural self-reliance (drawing on items such as Canadian water pumps), basic needs (requiring food aid and medical supplies) are among the ideas that have given temporary frameworks for the weighting of Canadian aid streams (Parliamentary Task Force on North-South Relations, 1980).

The story of Ghanaian aid from Canada is something of a microcosm of a broader tapestry.

The story of Ghanaian aid from Canada (dating back to food aid in 1958) is something of a microcosm of this broader tapestry. By the time that the training programme for public servants was embarked upon (1976), there was an 'aid-fatigue' atmosphere in CIDA. This resulted from a perceived lack of dramatic results in many countries, Ghana being a prime example. Strong personal loyalties and friendships existed between many senior CIDA officials and Ghanaians in numerous walks of life, but the frequency of coups and the accusations of corruption threatened longer-term Canadian aid commitments.

¹ CIDA was established in 1968 under the aegis of the Secretary of State for External Affairs. Canadian aid experience precedes that date by some 20 years, starting with food aid programmes to the Indian sub-continent.

² Developing nations' is used uncomfortably, in preference to 'Third World' countries.

In the case of Zimbabwe in 1980 the situation was different. In some ways Zimbabwe's new independence represented a chance to turn back the clock, for Canadian aid to avoid some of the previous mistakes and overly optimistic naiveties. The international promises of support for the ZIMCORD framework (Patel, 1985) were also viewed as auguring well. Thus the mood in CIDA was one of relative excitement, tempered by recognition of the strategic location of Zimbabwe in the unfolding drama of southern Africa. A strong multi-racial Zimbabwe, with democratic institutions, could have major significance for the broad region, as could a crumbling back to warfare and social intolerance. The Department of External Affairs and a few senior CIDA officials saw the training programme as a building block for broader Canadian-Zimbabwean relationships.

A building block for Canadian-Zimbabwean relationships.

Identification Phase

The Ghana Programme

The Ghanaian training programme resulted from a report by two Canadian consultants, at the request of the Ministry of Economic Planning of Ghana (McAllister and Sinclair, 1975). Its main findings included:

1. Development planning in Ghana was jeopardized by an artificially inflated exchange rate.
2. The national budget process was not coherently integrated; in part this was because the Ministry of Economic Planning was effectively responsible for the capital budget and the Ministry of Finance for the current one.
3. The Ministry of Economic Planning appeared to be widely viewed as 'ivory tower'. Whether speaking with public or private sector individuals, the Canadian consultants had been told that 'practical management skills' were badly needed.
4. Throughout the Ghanaian public service considerable value was attached to training, and, even more so, to the collection of degrees and certificates. Yet in contrast with many ministries it was discovered that the Ministry of Economic Planning officials virtually confined their study to overseas courses. There was something of an elitist attitude to outside training, regardless of subject matter.

The 'training needs' section of the report included three points:

1. Planning is not some isolated activity for which economists are automatically the best prepared. It was recommended that the Ministry of Economic Planning and planning units of other

Planning is not some isolated activity.

ministries should broaden their ranks substantially with officials from other disciplines.

2. Project identification and implementation, including financial management, were widely identified to be problems, yet there were no courses or other training activities being offered in Ghana for government officials that were built around those topics. Most planning officials lacked any on-site project experience at all.
3. It was concluded that more public service training in Ghana and less overseas study was the route to prefer. While some of the overseas training had no doubt been useful background for officials, it had been embarked upon in an unsystematic manner. The advisers recommended that a new series of courses be embarked on at the Ghana Institute for Management and Public Administration (GIMPA).

Before recommending GIMPA the consultants had visited the universities at Kumasi, Cape Coast and Accra, as well as a number of other institutions. The choice of GIMPA was not without opposition.

Over the years GIMPA had developed a number of courses for the training of senior public and private sector managers, as well as an introductory diploma programme for categories of entrants into the public service. With initial funding from the United Nations Development Programme (UNDP) and Ford Foundation in the 1960's, the college had become an entirely Ghanaian-managed and -funded institution. GIMPA had developed largely as a government staff college but, as an added strength, it had also formed links with the private sector, seeing the interaction of senior management from both the public and private sectors as a desirable ingredient. Some key senior faculty members had considerable public service experience, but few middle-level or junior lecturers had exposure either to government or to the private sector.

GIMPA is set on a low ridge, close to Accra; hence its popular name, Greenhill. The location enables local officials and businessmen conveniently to give lectures; much of Ghana's government and commercial enterprise is concentrated within the capital. Furthermore, the location enables participants to engage readily in field work in the ministries. Both conditions were necessary for the training proposed. As an added bonus, GIMPA is next to the University of Ghana, at Legon. Hence university resources could theoretically be drawn upon, although the relationship proved more distant than might be expected.

GIMPA was chosen because it showed a greater flexibility of approach than was found at the universities.

At the time of the review the senior management of GIMPA was positive about the case for training programmes of the kind under consideration, and offered constructive ideas about their establishment. They showed a far greater flexibility of approach than was found at the universities. However, the college's resources appeared stretched.

Additional buildings would be required, if extra programmes were to be added, without a phase-down of existing programmes or quite a radical change in the pattern of building use. It was feared by the advisers that radical changes, although possible, would disrupt existing and proven courses. The (1975) facilities enabled some 100 students to be on residential courses at any one period. Senior GIMPA faculty tended to be busy as consultants to ministries and corporations. Work assignments were far from evenly spread out among the faculty.

The Zimbabwe Programme

At the Lusaka Commonwealth Conference, in August 1979, Canada had agreed to assist in the strengthening of the public service capabilities of member countries seeking support. Zimbabwe was the first to draw on this new programme, entitled 'Management of Change'. Although the 'mainstream' of Canadian aid to Zimbabwe was to be allocated through the ZIMCORD framework, support for the Zimbabwe public service was financed separately. This appears to have been in part a quirk of CIDA's internal modus operandi, and in part a reflection of the concern by the Department of External Affairs that Zimbabwe's request for prompt help be readily met.

Management of change.

The initial idea was that a cadre of Zimbabwean public servants would spend some time in Canada 'as usefully as possible'. Two Canadian advisers³ were dispatched to Zimbabwe to meet ten candidates, whom the Public Service Commission of Zimbabwe had already identified, to discuss their needs. The advisers then returned to Canada to work out an appropriate training project to meet the situation. CIDA requested the personnel who had been involved with the Ghana programme to take on the Zimbabwe assignment, on the basis that the experience should be pertinent. The senior officials of CIDA were cognizant of some of the bureaucratic difficulties that had been experienced in launching the Ghana project, hence they were now determined to give relatively free rein to the Canadian university (in both cases Dalhousie University).

Preparation and Appraisal

The preparation and appraisal processes were quite different for the Ghanaian and Zimbabwean programmes.

The Ghana Programme

The preparation process for the programme in Ghana had been reasonably thorough. The consultants' documents were circulated as drafts, and follow-up meetings took place between the Ghanaian

From words to operational reality.

³ Barry Lesser and Alasdair Sinclair.

officials and Canadian authors. Modifications were made. Substantive inputs were made by GIMPA officials, in particular, to facilitate the bridging of the programme ideas from mere words in a report to an operational reality.

The GIMPA officials demonstrated that they knew how to work with their own administration⁴. Within weeks the consultants' report had no less than presidential approval, and dates had been established for an initial course in 'development planning and project management' targeted for 25 officials from a cross-section of ministries.

However, the CIDA officials had apparently (in Ottawa as distinct from Accra) not envisioned prompt follow-up commitments. They warned the consultants about the 'delays that were endemic to aid experiences in Ghana'. That was not to be accurate for this project. Within a few weeks of the completion of the consultants' report, CIDA was formerly asked by Ghana to assist in a training programme with ambitious output targets, detailed in the very format Canadian Treasury Board officers had been somewhat vainly seeking from CIDA for all their projects. CIDA's apparently loose framework for its general project activities in Ghana now impeded its own decision-making. The 'appraisal process' seemed obscure, which frustrated the consultants who sought some sense of guidance. Nevertheless, to CIDA's credit the programme gained approval; it did get launched in a time frame that allowed the starting schedule to be met. Arrangements were made for one of the Canadian consultants to go to Accra to help design and teach the first 3-month course, and to advise on broader programme evolution. If some of the same Ghanaian and Canadian participants had not been able to continue their involvement at this stage, the project would probably have foundered. The fact that the consultants had spelled out a schedule of implementation, with precise target dates, proved a useful approach for start-up purposes.

*Value of a schedule of
implementation.*

The Zimbabwe Programme

The Zimbabwean experience was distinct in a number of important ways. First, the preparation time was only a few weeks from initial request to actual start-up. Second, it began as a single 'pilot project' venture — ten officials to come to Canada for 3 months. It did not then have long-term targets or any broad planning framework. Objectives boiled down to: provide as useful an experience as you can in Canada for these ten Zimbabwean officials, whom we (the Public Service Commission) are selecting for this special 'management education'. Third, from the Canadian vantage point it was far easier to organize, since it was on 'home ground'. Fourthly, CIDA's commitment was radically different. Senior CIDA and External Affairs

⁴ Particular credit is given to James Nti (then GIMPA director) and Rolland Djang (then Deputy Director).

officials wanted to develop a rapid linkage with the Government of Zimbabwe. From the Zimbabwean end there were also several key differences.

First, while the Public Service Commission officials were very positive about the broad idea, they tended to be unclear about specifics. They had no local institution with experienced management educators like the two or three senior Ghanaian officials at GIMPA. Second, the University of Zimbabwe was even more remote from such activities than the University of Ghana (and overextended anyway); such other training organizations as existed in Zimbabwe were for clerical-level workers and certainly not for senior public servants.

While Ghana's political science was unstable, the public service structure that had evolved since 1957 was 'weathered' and contained experienced top administrators.⁵ It was at the middle-management levels that the problems seemed most severe. In Zimbabwe, however, the very role of the public service was being rewritten. There was a dearth of senior management in tune with the evolving new political directions. Many of the black Zimbabwean officials to come on that first course (one of the ten was white) were understandably believed by their Public Service Commission to lack self-confidence due to lack of experience; the Dalhousie advisers concluded they would be less likely to acquire self-confidence within Zimbabwe (especially if taught largely by Zimbabwean whites) than if they were exposed to outside practitioners, who had no links with Zimbabwe's previous domestic turmoil.

Ghana's public service contained experienced top administrators.

In Zimbabwe, the very role of the public service was being rewritten.

Implementation

Target Groups and Content: Ghana

The Ghanaian programme ran from January 1976 to June 1981, coincident with two Canada—Ghana agreements, the former from January 1976 to December 1977, the latter until June 1981. During the former 2-year period the Ghanaian project established a routine. This was to prove important during later times of political unrest. The main goals were specified:

1. to provide appropriate training for Ghanaian public servants in the fields of project planning and management, and financial management:

⁵ Particular mention should be made of the constructive role played by George Sackey, Director of the Budget and subsequently Head of the Public Service.

2. to establish a training capability, based at GIMPA, but drawing also on the services of Ghanaians in government and the private sector, in the above-mentioned fields.

There was much formal and informal discussion about the target groups. The consensus was that the participants should not be drawn narrowly from a single discipline or division of departments for the project planning and management course, albeit for the financial course the emphasis should heavily be on the Ministry of Finance and financial officers in other key spending ministries (such as Education and Transport).

The reason for the more catholic approach in the case of the project planning and management course was first that it was intended to be somewhat less specialized and to take in larger numbers (up to 30 per 3-month course), and second that project planning and management was a requirement quite broadly across the public service and state corporations.

*'Middle-management'
is a broad term.*

The level of participants was more problematic; 'middle management' is a broad term and it never really narrowed much beyond that. Of those participating in the project planning courses 63 per cent had a university degree or its equivalent. Disciplines included economics, law, accounting, engineering, medicine and health sciences and agriculture. Participants usually came from upper-middle management positions. Most were in their 30s, male and married. The officials participating on the financial management courses were somewhat less qualified (in formal terms) and somewhat more specialized (e.g. more had some accounting background); 173 Ghanaian officials completed the project planning and management courses, and 102 the financial management courses (Solverson, 1984).

The selection of trainee instructors was entirely managed by GIMPA. Three categories were informally identified:

*Government officials
proved excellent
instructors.*

1. Senior staff members who were already in the college, three of whom fitted this general category though not solely associated with this programme. The agreement enabled them to broaden their experience by visiting other training institutions and progressively running more of the courses themselves, until the Canadian instructors were phased out.
2. Junior staff members (four) were recruited by GIMPA for this programme. They were given a mix of on-the-job experience in Ghana, coupled with periods at Dalhousie University and in the Economic Development Institute of the World Bank.
3. Government officials who regularly taught sections of the courses. No formal training was given to them; they were already senior officials and many proved excellent instructors.

The *Project Planning and Management course*, although modified over the period, retained several essential elements (and always ran for 11 weeks):

1. A broad review of development planning both in Ghana and on a comparative basis. The kinds of issues brought out by Arthur Lewis (1966) and Albert Waterston (1965), for example, were emphasized in the comparative cases. (Both incidentally had advised Ghana, and Waterston was the first external reviewer to be consulted by the Dalhousie officials on the proposed shape of the training programme). Canadian and other visiting speakers (such as World Bank officials) provided the comparative perspectives. The Ghanaian illustrations were provided by Ghanaian practitioners from the ministries and state corporations. One major omission (in contrast to one course held in Zimbabwe) was that senior politicians did not teach in these courses (because of the political situation in Ghana). When top government politicians or military personnel did come, it was to open or close sessions. Senior public servants did help 'fill some of the gaps', but on a more technical level. *Planning in Ghana.*
2. A somewhat detailed examination of each main facet of the 'project cycle'. The kinds of issues developed in contemporary literature (Hirschman, 1967; King, 1967; Gittinger, 1972; Rondinelli, 1977; Meier, 1976) were grist for the mill of the theoretical and comparative experiences. Since the Canadian instructors were required to have substantial practical experience they drew on this in their contributions. Once again the Ghanaian elements were provided by practitioners from the Ghanaian public and private sectors. One routine issue, which was handled differently by instructors, was the degree of technical detail that should be introduced (especially in the case of cost-benefit appraisal). Participants had very varied backgrounds. Refresher/follow-up courses in more technical subjects were recommended by the consultants for such topics—but they never became a routine, despite periodic efforts on the part of the Canadians to encourage this. It simply was not a part of GIMPA's *general procedure* for courses. *The project cycle.*
3. A general management component. Some of the issues and techniques (such as critical-path and management by objectives) are to be found in standard works (e.g. Taylor and Watling, 1973; Walinsky, 1963; Humble, 1973; Arrow, 1974; and Waterston, 1965). Particular local cultural and social aspects are still not well documented, however, yet are critical for effective management practice in Ghana (e.g. Hill, 1963). Large sections of the general management segments of other GIMPA programmes were therefore grafted onto this course, always taught by Ghanaian officials. This proved an important step for the success of the project; it meant that from the outset the course was including Ghanaian-designed *A general management component.*

and -taught components. It was not thereby seen as 'an outsiders' course. Although the newer elements were designed and taught initially by Canadians, the Canadian inputs were deliberately not monopolizing the time. This was a routine instruction to all Canadian teachers. It might be noted that it was not always an easy one to adhere to, as the Canadians wanted to 'feel busy' when, from an effectiveness vantage point of ensuring that the programme became Ghanaianized, the 'less busy' the Canadians the less of a dependency syndrome might develop for their inputs.

Financial management.

4. An introduction to financial management section. Ideas from Waterston (1965) and Caiden and Wildavsky (1974) were representative. Emphasis was placed on ensuring that officials from the Ministry of Finance contributed heavily to ensure the relevance of the course to Ghana.

Field work valuable.

5. Finally, there was field work. This included brief missions to examine local projects (1-day visits), the review of specific programmes or issues in ministries (on a small-group basis with a report to be the outcome), an extended field visit (normally of between 1 and 2 weeks in rural Ghana), and a follow-up report back in the ministry after the course had finished. Because of transportation difficulties it was the first time that most participants had been exposed to such a mix of projects. This was probably the single most important element of the course, even though the classroom work was an essential precursor.

The *financial management* course was for a smaller group (average 20) and was more specialized. While it also embodied some of the more general management aspects of the other course, its main focus was to assist financial officers to understand the principles and objectives of good budget practices; to expose them to the planning, programming, budgeting concepts that were increasingly to be introduced by them when back in their ministries; and to tackle the practical problems of financial control and audit. Although materials such as Caiden and Wildavsky (1974), and Ontario and Canadian Government financial documents, were introduced, the Canadian instructor for much of this course⁶ compiled his own teaching manual with substantial Ghanaian supporting case materials. While the project planning and management course was taught as an 11-week, clear-cut session, with the participants away from their offices during the period, the financial management course (for logistical reasons) blended elements of in-service and non-residential training. On balance the instructors would have preferred the whole course to have been residential, since officials were liable to get caught back in office situations and, no small problem, the transport and other difficulties in Ghana resulted in periodic absenteeism and late-arrival problems.

⁶ Brigadier-General (Retd) David Pudney.

For both courses written assignments, case studies, audiovisual aids, outside lectures, field work, in-house Ghanaian- and Canadian-led lectures and discussions occurred. For both courses, some materials were specifically written, and books and pocket calculators were given to the participants and made available in the library at GIMPA. For both courses detailed evaluations were conducted at the time, and subsequently for various reviews. In addition to these main courses, a number of short refresher courses and several courses for very senior officials (including one for cabinet ministers) were run. Also segments of the new courses were injected, on an ad hoc basis, into some of the other courses held at GIMPA and outside.

Case studies used.

Target Groups and Content: Zimbabwe

The identification of target groups to participate on the courses was always entirely in the hands of the Ministry of the Public Service, Zimbabwe. Their main criteria were to be that the selected individuals were already at senior levels, or were en route to senior positions in the near future. The definition of senior tended to be somewhat loose: 'assistant secretary' was generally viewed as the floor level. In view of the fact that a substantial number of participants have subsequently attained under-secretary rank, and occasionally higher, the selection process appears to have been quite good. The Canadian advisers were concerned not to appear 'heavy-handed' in influencing who participated.

There was considerable discussion as to how long and how large each course should be, the number of participants that should be drawn from any one department, as well as the mix of disciplines and some balance of sexes. It was found that manpower shortages meant that rarely could more than one moderately senior official be spared at one time from a department to go to Canada, although several could sometimes attend the shorter courses in Harare. What, however, did occur in Zimbabwe (as also in Ghana) was that a 'Mafia' developed, by which is meant a group across the government who had attended these courses, 'spoke the same kind of language' as an outcome, and communicated effectively with each other afterwards. One result of the programme was an improvement in interdepartmental communications, according to many participants. As to field, there seemed general agreement that a mix of disciplines was appropriate and, so far as tribal or sexual balance was concerned, while the large majority were male Shona-speaking officials, a few Ndebele-speaking officials, a number of females and a few whites also participated. During the courses there were rarely any problems of lack of co-operation or integration. When such did occur it seemed more a reflection of personality quirks than for a color, tribal or sexual reason.

A 'mafia' developed - importance of networking.

Every effort was made on the Canadian part to emphasize pragmatism as distinct from ideological debate, to ensure that gut questions and issues were raised and analyzed without shirking tough discussion of

underlying principles. The officials were en route to senior positions. The emphasis was not to be of a 'spoon-feeding training kind'.

Two kinds of 'courses' evolved, those held in Canada and those in Zimbabwe. Four courses were conducted in Canada. Each was organized for ten Zimbabwean officials, lasted 3-4 months and embodied three main aspects:

1. An initial 2-4 weeks of course work at Dalhousie University for all participants, together with a final week to 'put the experiences together' preparatory for the return to Zimbabwe. The content of these courses varied over the period. Usually there was a segment on development planning, the project cycle, key management principles and personnel administration. Additional 'optional' units were organized for those wishing to tackle main themes in more detail, as well as to teach basics about the use of computers, and so on.
2. Individually tailored tutorials were also designed, enabling officials to catch up on specific gaps (self-defined with advice) and to strengthen some basic professional skills. About 25 percent of the total time in Canada was allotted for this process.
3. At least 50 percent of the time was allotted to field work, by which was meant exposure to how Canadian counterparts tackled similar kinds of problems to those on which the Zimbabweans were working at home (e.g. water supply, dam management, airport management, transport planning, rural school programming, various rural development and agricultural problems, applied research management, public sector and personnel responsibilities, housing for poor areas, and so on). As an adjunct, one week was spent with international development agencies (the UNDP, World Bank and CIDA) to meet with counterparts and to appreciate the required approaches for project proposal, management of funded projects and so on.

About 25% of time given to individual tutorials.

The second course model was implemented in Zimbabwe. Its origin was a request by officials who had participated in a 1-week workshop in 'development planning and the project cycle' during the first course held in Canada. They suggested that a course of a similar kind should be organized in Zimbabwe.

In March 1982 the first such course was conducted, over a 2-week period in Zimbabwe. Twenty-four Zimbabwe officials, from 16 ministries and departments, participated. The initial eight days focused on 'the development project cycle'. The remaining four days concentrated on 'development planning, programming and finance'. When examining the links between projects and programmes the emphasis was on rural development and manpower development. The

two Canadian instructors⁷ brought films, audiovisual aids, case studies and a special set of follow-up readings (three volumes) for the participants. Two brief field projects were also included in the programme — one rural and one urban.

In the following two years the courses were repeated for three and then three and a half weeks respectively. Three main adjustments were made:

Adjustments made as a result of evaluations.

1. For the second course (and intended for the third but problems in the Ministry of Public Service resulted in logistical failures) a number of cabinet ministers participated to ensure the political realities of planning in Zimbabwe were appreciated by the participants. This was an effective addition to the inputs already organized by senior public servants. The ministers were uniformly frank and to the point.
2. A 2-day field visit to rural Zimbabwe was added to the third course. This was effectively planned ahead of time and proved well worth the effort. The projects examined included a new cotton ginnery, a UNICEF-assisted nutrition project, two service town developments and a health clinic. They were not intended to be (nor were) 'model' projects.
3. A 'working text' was added to the last course by the Canadians, which provided an extra thread to the process. Such a text could not have been written earlier in the programme due to experiential needs. It supplemented follow-up books and readings (Kent and McAllister, 1985).

Supporting Administration and Research in Ghana and Zimbabwe

A strength of the Ghanaian programme had been the availability of a few committed and experienced public service educators at GIMPA. The Canadian inputs had course units to graft on to. The Ghanaian institutional support was solid. The GIMPA educators had worked as senior officials in the ministries. They knew the public service and how to get results. In the case of Zimbabwe no such organization existed, and the Public Service Ministry was simply not geared to handle public service training. The Canadian advisers had problems getting detailed feedback from the Commission itself, as distinct from their own evaluations. While a new staff college is now being planned, attracting and retaining the right mix of experienced and well-motivated people will be the main challenge, not the building of expensive physical plant.

Appropriateness of content.

⁷ Tom Kent and the author. For the third such course they were joined by Amon Nikoi, recently Minister of Finance for Ghana, usefully reinforcing the experiences from Ghana to Zimbabwe.

*Experienced local
practitioners were
constantly involved.*

The question of appropriateness of content inevitably recurs. The Canadian instructors, in both countries, sought to provide comparative insights and ideas, to ensure tough questions of logic were not evaded, and to encourage an analytical approach. At the same time pragmatism was emphasized and ideology was left very much to the Ghanaian and Zimbabwean instructors. In both Ghana and Zimbabwe the Canadian emphasis was to ensure that experienced local practitioners were constantly involved, and that local issues and field work were in the forefront. The Canadians emphasized the value of local case studies, audiovisual support and field research, but in neither country was very much being routinely undertaken. There is still a large task ahead for the development of appropriate, African-based, educational materials in development economics and public administration. Both in Ghana and Zimbabwe there seemed an ingrained assumption that London and North America are the appropriate sources for textbooks and other publications. In neither country was there adequate co-operation between university research activities and public service requirements. In large part this was because many academics were swamped by the teaching commitments for large undergraduate classes, but in part it appeared 'more prestigious' to write about the problems of industrial nations.

To aggravate the difficulty, despite efforts and promises to follow up talks with written papers for future use, very few African public servants delivered written papers. It would have been helpful if more effort had been made to foster such a process. Their talks were frequently of exceptionally high quality. There is no way outsiders can write as relevantly on developmental or public administration matters as people who have grown up within the region, imbibing its culture and sensitive to the social and political nuances.

The Logistics of Administration in Ghana and Zimbabwe

*Every course started
exactly on time over
a six year period.*

At times the logistical complexities of the programme in Ghana threatened to sink the project. There were coups, officials in CIDA at times seemed always to be changing positions or going off on French-language training, agreements never seemed to get signed in the appropriate year let alone month, telephones rarely worked and transport broke down. Despite such obstacles, every course started precisely on time, always with a full complement of participants and always with the key Ghanaian and Canadian instructors in place. Throughout the six years the same Ghanaian officials at GIMPA and at Dalhousie University were committed to do whatever had to be done to produce results. At both ends there were small teams (of some three people in each place). The project worked, even though the bureaucracies around them in Canadian and Ghanaian sponsoring agencies (CIDA and the Ministry of Economic Planning) seemed, quite often, to be 'process-befuddled' rather than 'goal-oriented'.

The logistical problems of the Zimbabwean project were simple in comparison to the Ghanaian experience. Telephones and transportation systems worked quite adequately. The Zimbabwe Public Sector Commission was always supportive in principle, if not always in actual results. The Zimbabwe Public Service Ministry, while unreliable at the more junior levels, was constructive at the level of Permanent Secretary. The Minister was periodically involved and always clear-headed. CIDA officials were consistently positive, effective and 'unbureaucratic', and so were the representatives of External Affairs at the Canadian High Commission in Harare⁸. In Canada the logistical problems of arranging individualized programmes across much of North America were handled by energetic young administrators⁹ and goodwill was everywhere encountered in public agencies, business and other educational institutions.

Some logistical difficulties, such as coups, are difficult to plan for, but those apart, four 'lessons' might be drawn from these two programmes:

1. Logistical red tape must never be allowed to dominate projects. Actions on major issues quite often have to precede the dotting of *i*'s and crossing of *t*'s if such projects are to be effective. Bureaucratic details can be tidied up later.
2. Written comments and reports are important and should be a routine. They are, however, no substitutes for goodwill and commitment. Both are necessary for a project's success.
3. Counterpart colleagues in the host nations are an important requirement for the long-run success of a project. In Ghana this worked; in Zimbabwe it did not adequately.
4. The 'big view' of a project — the broad goals and main strategy — can readily be lost sight of. Yet it is critical to a project's success.

Red tape must not dominate projects.

The big view of a project is critical.

Financing

Each programme brought its own financial frameworks and lessons. In the Ghanaian case the principle was that Ghana would pay for the costs of all Ghanaian technical services and operational support costs (such as gasoline for transport, offices for Canadian faculty, and so on), while Canada — through CIDA — would pay for the salaries of Canadian personnel, for library support, for the Ghanaian faculty when they had

Clear goals important and competent accounting.

⁸ Particular mention should be made of Lewis Perinbam and Hylda Bateman of CIDA, and David Elder, Robert McLaren and Alan Bowker of the High Commission in Zimbabwe.

⁹ Mention should be made of the excellent work of Ethel Langille, Michael Gardner and Michael Cleland.

to go outside Ghana on official project business, as well as for a number of cars, buses for field work and general project transport purposes, and a grant to cover the foreign exchange components of some additional building at GIMPA¹⁰. Apart from lags in agreements, both sides were quite efficient throughout. The main lesson was the importance of clear goals, competent accounting procedures and determined administrative officers to ensure that the programme did not get snarled up.

The Zimbabwean arrangements were also reasonably balanced¹¹. The Canadian Government, through CIDA, paid for the full costs of the training in Canada. The Zimbabwe Government continued to pay salaries for the officials on educational leave, but Canada paid their travel and accommodation costs. The Canadian Government paid Canadian personnel costs when they were teaching in Zimbabwe. The Zimbabwe Government paid for all training facility costs and local transport for Zimbabweans. No building grants or other hardware purchases (such as cars) were made. CIDA delegated the financial management more directly to Dalhousie, as implementing agency for the Canadian programme. This made for a straightforward process. One problem recurred in both projects and is a difficulty of bilateral aid arrangements, namely the influence that the recipient government should have on the allocation arrangements of the donor government. In the Ghanaian case there were times when (somewhat peripheral to the project) Ghanaian officials sought to have more cars bought at the expense of the technical advisers. In the Zimbabwean case, when the Public Service Ministry had its budget cut, efforts were made to negotiate the Canadian funds to bolster domestic requirements and to pay Zimbabwe consultants at the expense to the participants coming to Canada for training. Such issues are possibly endemic in such financial arrangements; they can sour relationships. While in neither project did they appear directly to affect actual courses that were held, they did result in some unnecessary acrimony.

¹⁰ The Canadian Government (through CIDA) allocated some Can. \$1.8 million to this programme with Ghana, including a grant of \$500,000 for building expansion at GIMPA, a number of field buses, cars, library support materials, etc. Ghana's contribution is harder to measure as the programme was injected into an ongoing college system. In local currency (at the official and very artificial exchange rate) the Ghanaian contribution was approximately of a matching amount.

¹¹ The Canadian (through CIDA) contribution was in the order of Can. \$1 million to this programme; the Zimbabwean costs were considerably less in narrow financial terms; if estimates are made of short-term opportunity costs when officials are on courses a somewhat inflated number can be used.

Evaluation

Processes

Evaluation was always treated seriously by both the implementing groups in Ghana (GIMPA and the Dalhousie group). Continuous monitoring and reporting systems were developed from the start, as a result of which data were readily available for a variety of evaluative approaches. These included end-of-course evaluations by the two teaching groups, end-of-year reports to CIDA and the Ministry of Economic Planning, two external evaluative groups organized by the Ministry and CIDA and, as a most useful post-mortem which included follow-up of all the participants when the project had been completed for a year, a painstakingly careful thesis (Solverson, 1984).

Evaluation has to be treated seriously, as does follow-up.

In the case of the Zimbabwean programme a similar emphasis on the importance of evaluation was placed by both the Canadians and the Zimbabweans, even though the Zimbabwe Public Service Ministry was less experienced than GIMPA in undertaking such activities. To date the process has comprised post-course reports and annual reports, with a follow-up analysis of all participants who have come on the Canadian visit.

Costs and Benefits

The results of the Ghanaian and Zimbabwean evaluative work have pointed to several conclusions:

1. The participants have found the experiences relevant and are in the large majority positive.
2. Those for whom the participants work (e.g. permanent secretaries, etc.) are, in many cases, also supportive, but the track record has not by any means been 100 per cent. Not all top management has either been effectively kept in the picture or has treated such educational work very seriously. For the participants this can be disheartening; great attention needs to be given to this aspect in such projects.
3. Despite political turmoil in Ghana, GIMPA continued to run courses after the Canadian involvement concluded. Moreover, many of the participants are still working as officials in the public service and state corporations.
4. Whereas the Zimbabwean participants (over 100, a few of whom attended both courses) have continued with the public service — and many have had promotions to senior positions — no cadre of instructors in Zimbabwe was ever formed to continue work. While the Canadians did recommend this, the Zimbabwean Public Service Ministry never put in place the necessary arrangements — as it was

awaiting the formation of a staff college. As an outcome, there is likelihood that the fall-out benefits from this programme will be less substantial than might otherwise have been the case.

Instructors must have substantial experience in the field — not just book knowledge.

5. Senior and middle managers in the public service, when they attend courses, understandably expect the instructors to have considerable and relevant experience. In both Ghana and Zimbabwe experienced practitioners were invited from their work to give lectures and participate in discussions. Provided they were well briefed ahead of time, that generally worked out well. But each course also required key anchor people, in addition to the Canadian advisers/instructors. In Ghana, and more so in Zimbabwe, there was a tendency to underestimate the importance of those anchor roles and to allocate instructors (who might well be academically qualified) without solid working experience in government. There were a number of times when Canada was being asked to train young college graduates, devoid of experience to teach public servants. At the same time there were experienced and very capable public servants who would have been glad to become instructors, provided that the salaries were more competitive. Frequently, in the context of the costs of the programme as a whole (including to Canadian taxpayers), the salary differences were quite small, yet they never were negotiated to the great cost of better public service training.
6. Various efforts to quantify inputs and outputs associated with these courses, and the programmes as a whole, have not led to sweeping conclusions. On a cost-per-student basis it was more efficient to run courses in the home nation (Ghana and Zimbabwe); but that was always done in the case of Ghana, whereas the prevailing circumstances appeared to prevent the kind of experience sought being 'achievable' in Zimbabwe at that particular time. The use of well-managed hotels, in the case of Zimbabwe, appeared to be cost-efficient in the context of the courses run in that country, especially since there were many time lags between courses. (It could be countered that the very existence of a staff college building could have acted as the stimulus for more Zimbabwean-run courses). Measures of cost-per-participant indicate that some slack occasionally occurred in the number of participants attending the financial courses in Ghana and one of the courses in Zimbabwe (20 officials participated in the third course when 25-plus could have been accommodated). That indicated the importance of effective registration and follow-up procedures. While there was no magic to the number 25, it was found in both Ghana and Zimbabwe to be 'about right for the kinds of teaching methods used.' At times the number was exceeded by no more than five or six extra participants without dire consequences, presumably improving the 'cost efficiency'.

7. It was in assessing outputs that more problems occurred. It was one thing to count how many officials completed courses; it was quite another to assess 'how effective' that education/training in fact was. It was decided, for all courses, that examinations were inappropriate. These were not intended to be 'back-to-school' type experiences. Short-term measures, moreover, would only show 'so much'. The fact that end-of-course questionnaires and oral interviews indicated a positive attitude, while helpful, did not indicate 'how effective' the officials would subsequently be as an outcome of the courses. Follow-up evaluations were routinely done after participants had been back at work for various periods, including occasional questionnaires to their bosses (this latter was a delicate process). Once more the outcome appeared positive. These kinds of output yardsticks are impressionistic. It would have been tidy to have had but one clear goal, and for the goal to have been objectively measurable in an unambiguous fashion. In fact the goals were quite complex, and far from readily quantifiable in a reasonable manner. Had a few 'good ideas' been introduced into a few minds, and those officials then assumed influential positions where those ideas could have been translated into practice, then the positive impact on the welfare (appropriately measured) of the respective nation could have been substantial. Proxy indicators, such as the numbers who completed courses, are of some use but should not be overblown. While development agencies may be generating acceptable 'rates of return in broad terms' on investments of this educational nature, it is believed that they (as well, of course, as the recipient nations which are also investing heavily in a variety of ways) should place more importance on the evaluation of these kinds of joint endeavors. On the one hand, education programmes have tended to be viewed as rather picayune and even 'soft' in the context of the expensive hydro-power dams and railway lines; on the other hand, their 'lessons' have tended to be 'bottled-up' in consultants' reports that have not been readily available for comparative purposes.

Inputs easier to measure than outputs.

Some Concluding Comments

The author has been involved in both programmes from the start. This article is inevitably somewhat subjective as a result. A maze of detail can readily swamp objectivity and key questions can become submerged by local colour. Four such questions will include.

1. Did these programmes really make any substantial difference for the better to the quality of the respective Ghanaian and Zimbabwean public services?

Having participated in many of these courses, and heard such a variety of speakers, it is hard to envisage how some benefits would not have occurred. Certainly, at a technical level, there are many pointers to

More rigorously planned and evaluated projects.

more rigorously analyzed projects, more tightly argued budget proposals, and the like. As to whether 'better judgment' has occurred on any large scale, and 'better development' or 'better government' has been a product, is difficult to say with any degree of objectivity. In the context of the dramatic events taking place in each country at the time, courses to help further 'train' public servants were only small drops in large buckets. The fact that the majority of officials who participated continue to be positive is a fragile 'weather vane'.

2. Were these courses really relevant to the societies into which they were injected or were they 'too North American' in flavour and contextually inappropriate?

*Value of comparative
perspectives.*

In the case of all courses actually held in Ghana and Zimbabwe, the frameworks may largely have been 'injected' (though for Ghana that is too strong a word), but the content was quite substantially contributed by Ghanaian and Zimbabwean personnel. That was always an important part of the process. The Canadian contribution emphasized comparative perspectives and sought also to foster an analytical approach to problem-solving. Sometimes the Canadian examples were not as pertinent as they might have been; however quite often they almost certainly were (there were surprisingly many institutional similarities between the three countries, many because of the Commonwealth links). The evaluations by the participants routinely ranked the Canadian instruction very positively.

*Perspectives were
broadened.*

In the case of the courses conducted in Canada, the danger of irrelevance was greater. However, perspectives were undoubtedly broadened and that was an important benefit. Except for emergency situations, ten is a large group to be effectively guided for such a tailor-made and intensive (3-month) overseas programme. The conduct of routine courses in Canada is one thing; the management of tailor-made courses in a condensed time frame is far harder. Smaller numbers would be more readily manageable for any future such projects especially regarding secondments in Canadian ministries.

3. It may be conceded that Ghana and Zimbabwe gained benefits — but what about Canada?

For whose benefit?

Hopefully aid is not given solely to benefit the donor nation. However, quite often the benefits are substantial to the donor, and not only in crassly commercial terms such as orders for steel or wheat. Those Canadians who participated directly — faculty, government and business officials, a student writing a thesis, and so on — had their horizons widened and made many true friends. Many others, for example students at Dalhousie, have consequently had the privilege of working with officials from Ghana and Zimbabwe, now use case studies from those countries, and even on occasion visit those nations on research and other visits made possible by contacts directly resulting from the projects. But Canada has gained other benefits: many of the

Ghanaian and Zimbabwean officials will now be quite positive and much better-informed about Canada, they will indeed be more open to Canadian products (several links occurred of a very concrete nature), and they will better appreciate Canadian concerns in international negotiations and UN conferences.

4. Could the aid funds not have been better spent, either more cost-effectively or in places like Ethiopia, or on things like water pumps or a couple of city buses for Harare?

These questions apply to Canadian aid policy as a whole. Almost any aid funds can no doubt be 'better' spent according to a variety of criteria. The author has concluded, rightly or wrongly, that aid to 'people development' is, in the longer run, more effective than aid in the form of capital projects, however desirable the latter may sometimes appear to be on the surface. Yet there is, it is argued, a strong case for both, just as there is a need for short-term food aid in times of famine. Ideally, projects to help people help themselves should be at the heart of aid philosophy.

Of the two programmes, the author believes that the Ghanaian institution-building philosophy was the preferred route, other things being equal. But other things were not equal. Zimbabwe had no staff college equivalent at that time. More effort, probably, should have been made to foster such an approach by both Zimbabwe and, in a suitably diplomatic manner, by Canada.

*Institution-building
philosophy supported.*

No doubt either programme could have survived without major output reductions on slightly lower budgets; yet it is equally true that larger budgets (with a longer time frame in the case of the Zimbabwean projects) might have made for better long-term results.

The country choice issue is a much tougher question. Why aid to Ghana; why to Zimbabwe; how much is appropriate; to what broad ends; and so on? Zimbabwe, in particular, is a country of extremes; it is pertinent to ask why Canada (with its own poverty problems) should be buying tractors for rural Zimbabwe, when so many Zimbabweans are luxuriating in very fashionable surroundings. It is true there are very many people in rural Zimbabwe in desperate conditions, but what are the rich Zimbabweans doing about them? Almost all aid projects encounter these same kinds of issues. Nor are they confined to the Third World.

*Why give aid to Ghana and
Zimbabwe?*

Why should West Germany aid southern Italy through the European Regional Development Fund, when so many northern Italians evade paying taxes and holiday in mansions on the Riviera? Or back to the Canadian aid situation: it is known that when the people in the Gaspé, Cape Breton or Newfoundland pay tax dollars to Zimbabwe, Ethiopia or India, some of those funds will eventually trickle into the hands of

prosperous merchants in those countries who give no signs of caring for their own poor.

Zimbabwe now has Canadian-made trains. If they work well, more orders will likely flow and other nations will note this success. Ghana now uses Canadian turbines. Once more a series of 'multiplier' effects can follow. It is as a result of these kinds of linkages between Canada and the developing nations (discussed in this paper) that future trade opportunities become that much more possible. Precise benefits cannot always reasonably be nailed down to small programmes of this kind, but they are further building blocks.

*Aid is not a matter for
absolutes.*

Aid is not a matter for absolutes. Canadian aid has traditionally been relatively unideological in style. Canada does not only assist nations when their systems are 'mirror-images' of our own. But not all developing nations are on the recipient list. Nor has Canadian aid been the outcome of only one set of priorities. Humanitarian considerations have usually played a part, and hopefully always will in an unabashed manner. But so has a concern to strengthen trade links and benefit Canadian exports. So have political interests and regional alignments, so have defense reasons and, even occasionally, personal friendships (as between Trudeau and Nyerere).

It is against such a setting of ambiguities that these two programmes have to be viewed. It is to be hoped that, at least on grounds of longer-term developmental value to Ghana and Zimbabwe, they will be judged to have been net contributions, by impartial observers in those two nations.

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Annex: Post-Project Linkages and Opportunities **Some post-project links with Ghana**

- A number of undergraduate and graduate students, associated with Ghanaians who had come in touch with Dalhousie faculty during the project, later came to Dalhousie as an outcome. They included:
 - (a) Two sons and a daughter of Justice Siriboe completed undergraduate degrees at Dalhousie and the eldest, Juaben, completed an MBA and is now with the IMF in Washington. He also worked, upon graduation, in Zimbabwe as a faculty member of the University of Zimbabwe - linked through the Dalhousie agreement with that country;
 - (b) Gloria Brown, an official from the Volta River Authority, completed an MDE at Dalhousie and wrote her thesis on the socio-economic impact of the Akosombo dam;
 - (c) Desmond Sackey, son of the former head of the public service, completed an MDE at Dalhousie;
 - (d) Kwab Gyasi-Twum, son of the former alternative Executive Director of the World Bank, completed an MDE at Dalhousie;
 - (e) A number of other Ghanaian students came to Dalhousie, also as an indirect outcome of the linkage relationship - but, as with the above, after it was completed.
 - The former Governor of the Central Bank and Minister of Finance, Amon Nikoi and the former Minister of External Affairs, Gloria Nikoi, taught at Dalhousie for three years and their daughter, Nana, completed a degree at the university.
 - The former Vice-Chancellor of the University of Ghana, at Legon, came to Dalhousie as the first incumbent of the Pearson Chair. Dr. Alex Kwapong continues to be a member of Dalhousie's Senate Committee on International Development.
 - Howard Solverson, a Canadian, wrote a post-project evaluation thesis on the Dalhousie-Ghana project, winning a distinction for his MA in education.
 - A subsequent link has occurred with the Medical School in Kumasi, as an outcome of the visit to Dalhousie by the Nikois.
 - Case studies and other materials, initially developed under the Ghana and Zimbabwe projects, are still being drawn upon in Dalhousie classes, as well as on subsequent projects (e.g. Nepal).

Some post-project links with Zimbabwe:

- A linkage agreement, an outcome of the project described in this chapter, was established between Dalhousie and the University of Zimbabwe to provide help to the U of Z business and public administration programmes. This resulted in a number of U of Z faculty taking graduate programmes at Dalhousie, Dalhousie faculty teaching in Zimbabwe, and so on.
- Two Dalhousie MDE students (Gabe Beckerman and Craig Johnston) wrote theses in (and about) Zimbabwean development aid programmes.
- The former vice-chancellor of the University of Zimbabwe, Dr. Walter Kamba, has become a member of Dalhousie's Board of Governors and, in his role now as President of the International Association of Universities (AIU), has worked closely with Dalhousie faculty on the theme of 'sustainable development', both at the Rio Summit and at a conference organized by Dalhousie with the AIU and other bodies, in Halifax.
- In the summer of 1994, Dalhousie co-sponsored a four week seminar, with the University of Zimbabwe and SPECISS College, in Harare. The theme was Sustainable Development and it was for Commonwealth African officials. It was a continuation of a series of such workshops that had been held at Dalhousie and, like them, was funded by the Commonwealth Secretariat.

Opportunities Beyond

Universities have the flexibility and potential institutional capability to contribute far more than most other kinds of institutions to sustainable development goals.

Many close professional and social friendships have followed these two linkage projects and the above examples are illustrative only. It takes a long time, and many shared experiences, to build up the kinds of relationships Dalhousie, Ghana and Zimbabwe forged during the decade and after. A concerted effort, by both Dalhousie and CIDA, could undoubtedly have resulted in a more comprehensive and sustainable set of relationships with those countries - benefiting business, public bodies, NGO's and universities/staff colleges considerably more. Universities have the flexibility and potential institutional capability (because of students, faculty research interests, alumni and community service links) to contribute far more than most other kinds of institutions to sustainable development goals - but to do this effectively, they need to develop longer-term frames of reference with funding agencies as CIDA, coherent relationships with the private sector and NGOs, as well as to demonstrate a clear commitment to international relationships that go far beyond single project and individual student connections.

8

DALHOUSIE'S HUMAN RESOURCE DEVELOPMENT PROJECT IN NEPAL

by Paul B. Huber¹

Introduction

Nepal is among the ten poorest countries in the world [World Bank 1991, Table 1], and indeed, its ranking may have slipped downward over the last decade [Khadka 1991; Seddon 1987]. The literature on development does not fully reveal why some desperately poor countries make so little economic progress, but it does offer clues: a poor physical resource base, a dysfunctional education system, low levels of physical capital per person, and -- perhaps paramount -- cultural attitudes which are hostile to economic progress [Bista 1991]. Many of these handicaps characterize Nepal, and they do not appear to be counter-balanced effectively by internally-generated forces for "dissemination of the attitudes, knowledge, and skills favourable to development." [Myrdal 1966, p. 1621] In this context, one of the challenges facing Nepal is to improve the way its public service functions. [World Bank and UNDP 1991, Suvedi 1983, Panday 1989].

The dependence of Nepal on foreign aid is high [Panday 1989]. Yet significant and increasing amounts of development assistance remain unutilized because of inadequate absorptive capacity [World Bank and UNDP 1991, Poudel 1991]. For example, 51 billion Rupees of new aid were committed over the five fiscal years 1985/86 through 1989/90 but only 24 billion Rupees disbursed². To put these numbers in perspective, total expenditures of His Majesty's Government of Nepal (hereafter, HMG) over the same period amounted to 73 billion Rupees; GDP was estimated to be 345 billion Rupees [HMG, Ministry of

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¹ For close reading and many critical comments, thanks are due to Ian McAllister. I have not always accepted his suggestions and absolve him from all responsibility for the results. All errors of fact or interpretation should be attributed solely to me.

² About a third of both commitments and disbursements was grant aid, from both bilateral and multilateral sources. Of the total amount of aid, two thirds came from multilateral sources [HMG, Ministry of Finance 1982, Tables 8.6 and 8.8].

Finance 1992, Tables 1.1 and 8.1].³ In other words, about a third of the budgeted expenditures of HMG are being met by foreign aid.

The Project seeks to assist the development of Nepal's human resources at two levels: on the one hand through upgrading the qualifications of staff members of CEDA; and on the other hand, through offering, on a cooperative basis, training courses in project analysis, development planning and related areas to the public and private sectors in Nepal.

The CIDA-funded project reviewed in this essay (hereafter, the "Project") got under way in 1989. It is intended to make a modest contribution toward training Nepalis to plan and manage economic development at both micro and macro levels. It links Dalhousie University in Canada with Tribhuvan University in Nepal: more specifically, the Department of Economics in the former with the Centre for Economic Development and Administration (CEDA), one of four research institutes at the latter. The Project seeks to assist the development of Nepal's human resources at two levels: on the one hand through upgrading the qualifications of staff members of CEDA; and on the other hand, through offering, on a cooperative basis, training courses in project analysis, development planning and related areas to the public and private sectors in Nepal.⁴ A further goal is the enhancement of CEDA's capabilities in applied policy research and consulting. Major Project activities directed toward these goals include (1) mounting the training programmes just mentioned, (2) cooperative development of a comprehensive management planning process for CEDA, (3) enrollment of CEDA staff members in graduate study programmes at Dalhousie and in short-term diploma courses at centres in south and south-east Asia, and (4) delivery of equipment, library and training materials.

CIDA has committed slightly more than \$1 million for the five-year Project through its Institutional Cooperation and Development Services (ICDS) branch. Dalhousie University and CEDA make contributions in kind, mainly in faculty time, partly in other services and materials; Dalhousie receives overheads in respect of its contributions, CEDA receives hardware and actual services from Canada. Of course, there are also intangible benefits to Nepal and to Canada, whose magnitude cannot readily be quantified. Chief among these is doubtless the positive cross-cultural interaction arising from the presence of Canadian Project participants at CEDA and of CEDA staff members as students at Dalhousie. Certainly the latter enrich Dalhousie's international development programmes, providing a perspective which is important and valuable.

The remainder of this essay is organized as follows. First, the conception and the history of the Project are presented in sections two and three. Then the following three sections describe various constraints facing the Project and analyze some of their effects; these

³ Because the Rupee lost a third of its value over this five-year period, these data -- many of which originally are U.S. dollars -- are not fully comparable; but the magnitude of dependence is clear.

⁴ This second level of training activity, which is directed beyond Tribhuvan University, distinguishes this Project from the typical linkage project.

sections describe the counterpart institution in Nepal, consider some relevant features of ICDS funding and briefly analyze the incentives facing participants in the Project from Canada. The achievements and current (March 1993) status of the Project follow. At the end, there is a brief attempt to distill some lessons from the Project's experience thus far and to examine the auguries for the future. Because the author is directing the Project, subjectivity is inevitable. Caveat lector.

The Project: Conception and Concept

In 1984-1985, Dalhousie's Department of Economics hosted an IDRC Pearson Fellow from Nepal's Ministry of Finance. Later, the Chief Secretary of HMG asked him to complete a Master of Development Economics degree and write a thesis on Nepal.⁵ Shortly after the return of the Pearson Fellow to Nepal in June 1986, the Secretary of the HMG Ministry of Finance requested Dalhousie University to consider helping in the training of civil servants in Nepal. The Project germinated from this request.

The Secretary of the HMG Ministry of Finance requested Dalhousie University to consider helping in the training of civil servants in Nepal.

A year later, during a visit to Nepal by a representative of Dalhousie, the then Vice-Chancellor of Tribhuvan University suggested -- and officials in the HMG Ministry of Finance supported -- a linkage of Dalhousie with CEDA. It was thought that this would increase the training and research capacities of Tribhuvan University in applied development policy and programming, while simultaneously providing at least some of the training needed for public servants. Subsequently, a draft proposal for cooperation was submitted to Dalhousie by the Executive Director of CEDA, under a covering letter from the HMG Ministry of Finance. A further exploratory trip to Nepal followed in August 1988 by representatives of Dalhousie. Their first thoughts were that a project at CEDA might be structured along lines similar to Dalhousie's successful experiences in training civil servants in Ghana and Zimbabwe (described elsewhere in this volume).⁶ In 1988 dollars, that would have implied CIDA funding of \$2.5 to \$4 million over a five year period.

Due to anticipated problems in securing funding for a project of this size, a much smaller proposal was submitted in October 1988 by the Dalhousie Department of Economics for the maximum possible level of ICDS funding; this was approved in principle three months later and in May 1989, the contract was signed with CIDA for its contribution of

⁵ The subject of the completed thesis was Canadian aid policies and experience in Nepal; with revisions and editing by the Project director and financial support from IDRC, the thesis [Poudel 1991] was recently published in Kathmandu.

⁶ When the Ghana and Zimbabwe projects got under way, both were classified as middle-income countries by the World Bank [1980, Table 1]. Nepal, as noted above, is among the poorest countries in the world.

slightly more than \$1 million. Thus, once a formal project proposal was submitted to CIDA, delays in funding and in starting the Project were minimal. However, in the process of shrinking the Project to fit within ICDS funding framework, the intended outputs of the Project were reduced by a considerably smaller ratio than the financial support sought. As a consequence, the Project was overambitious and would have experienced difficulty in fulfilling its quantitative output targets even if the political environment in Nepal had remained stable, as was assumed in the Project proposal, and no other problems had been encountered.

The Project: Implementation and Experience

In early April, 1989, a month before the Project was to start, India closed its border to trade with Nepal.

In early April, 1989, a month before the Project was to start, India closed its border to trade with Nepal. This rapidly led to major fuel shortages and political uncertainties. One immediate effect of this fuel crisis was that CEDA requested postponement of the initial trip of the Project Director to Nepal. On that trip, which took place a month later than planned, it was learned that a Memorandum of Understanding (MOU) approved by HMG of Nepal was necessary for the Project to have official status and to import equipment free of duty. This news was unexpected since neither CEDA nor contacts in the Nepalese Ministry of Finance nor experienced officials at Dalhousie or CIDA/Ottawa had ever hinted at this eventuality. At the same time, only 75 days after the Project funding agreement had been signed, ICDS cut the budget by 3.4 percent and required a "re-profiling" of expenditures. This essentially entailed a partial postponement of budgeted expenditures -- which was not unwelcome, given the MOU and fuel crises already afflicting the new Project.

It was hoped that approval of a rapidly drafted MOU would be forthcoming within about four months, so that equipment deliveries and short-term scholarships could be implemented in the first fiscal year of the Project. However, the approval process took 16 months. The political events in Nepal, which are described next, were the main causes of this delay, but some responsibility must also be attributed to officials at Dalhousie who were unwilling to accept the experience of another Canadian university with long involvement in Nepal and insisted that MOU provisions, which had recently been approved by that university and by Nepalese authorities for two larger and more complex projects, were inadequate and needed total redrafting at Dalhousie.

The partial Indian trade and transit blockade began to relax after eight months and subsequently came to a negotiated end.

The partial Indian trade and transit blockade began to relax after eight months and subsequently came to a negotiated end. Loss of foreign exchange revenues, higher import costs and severe fuel shortages were the consequences of this exercise in Indian diplomacy; the result for Nepal was increased fiscal stringency, limiting funds which might have been available to support the Nepalese local inputs into training

activities. As the trade "crisis" wound down, political demonstrations in the Kathmandu Valley multiplied. These emanated primarily from the University, centering on the Kirtipur campus where CEDA is located. Professionals in CEDA were arrested, albeit for brief periods; telephone lines were cut; armed confrontations occurred. In early April 1990, after many demonstrators had been shot in front of the palace gates, the King gave way and a new interim government took power. Unrest continued, and a rigid curfew was imposed. Two training initiatives which had been scheduled for May-June 1990 had to be postponed.⁷

These revolutionary events had both direct and indirect effects on the Project. First, a further drop in international tourism exacerbated the government's (and CEDA's) fiscal problems; moreover, donor agencies cut back discretionary spending and new initiatives. Second, some supporters of the Project lost their jobs. For example, the newly-appointed Vice-Chancellor of Tribhuvan University was forced to resign as were the other senior University officials, including CEDA's Executive Director. The new Executive Director carried on with a training programme planned for August 1990, but initially was understandably cautious regarding new Project initiatives. Third, the new "revolutionary context" meant a further review of government decisions on the MOU and cancellations or delays in financing programme initiatives of CEDA. A specific and rather ironic casualty of the revolutionary fervour was the Project's link to the Ministry of Finance: new officials in that Ministry insisted that the text of the MOU had to be purged of all references to the Ministry of Finance.⁸ Finally, the atmosphere in this period was uncondusive to organizing and presenting training programmes. Political changes, shifting expectations, strikes, demonstrations and interminable political meetings preoccupied the time and energy of Nepalis at the University.

These revolutionary events had both direct and indirect effects on the Project.

The first post-revolutionary government in Nepal inherited massive fiscal problems and had a mandate only to draft a new constitution and prepare elections. Hence it was reluctant to spend money and make decisions. A year later, in May 1991, although plagued by factional infighting, the Nepal Congress Party won a narrow election victory; hence, the political instability of the previous 16 months continued in attenuated form.

⁷ The Project Director, accompanied by his spouse, was in Nepal at this juncture, attempting to push ahead as best as possible with the Project.

⁸ This may have reflected the reserved attitude of the new Minister of Finance, Devendra Panday [1989], toward foreign aid.

Constraints Facing the Project: A Sketch of the Counterpart Organization

In this period, CEDA was the only institution in Nepal providing training and conducting quasi-independent economic and social analyses.

With financing from the Ford Foundation, CEDA was set up as an independent institution in 1969. The Ford Foundation withdrew from all activities in Nepal in the mid-1970's and CEDA was absorbed into Tribhuvan University in 1976. In this period, CEDA was the only institution in Nepal providing training and conducting quasi-independent economic and social analyses; it attracted external support and was a magnet for bright, well-educated and energetic Nepalis. However, at the beginning of its second decade, CEDA started to lose a significant number of key professionals from its complement of about 40. Some moved into high-level government jobs; others transferred to the Nepal Administrative Staff College, which was set up in 1982 as the major training institution for the civil service; others became private consultants; and some retired or left for study abroad.⁹

Having lost much of its training mandate outside Tribhuvan University, CEDA's training activities have been limited and ad hoc over the last decade. Training partners, other than Dalhousie, have included Bradford University (England), the Ford Foundation, the Konrad Adenauer Foundation (Germany) the Rehovot Development Study Centre (Israel) and Winrock International.¹⁰ CEDA concentrated increasingly on research. While some of its research has been funded through the University, most has been commissioned by various Nepalese ministries (supported by foreign aid) or directly contracted by one of the various donor agencies in Nepal.¹¹

External contract revenues vastly outweigh CEDA's normal budget allotment through the University.

The foregoing description is based on the 1988 Project proposal to CIDA. What was not adequately appreciated at that time, despite considerable exploratory effort by the Dalhousie initiators of the Project, was the incentive and budget structure within CEDA. In this regard, the key points are that external contract revenues vastly outweigh CEDA's normal budget allotment through the University and that these external revenues -- although highly unstable -- appear essential for its viability as an organization. Salaries paid at CEDA have to correspond to those for similar ranks in the University. At

⁹ Of its current professional complement of about 40, a third are studying abroad, seconded to other organizations, or on leave. This is a changing third of course; probably half the staff is away from CEDA during some portion of any given year.

¹⁰ Former partners also include the International Institute for Labour and Cooperative Development (Israel), INTAN (Malaysia), Asian Development Bank (Philippines), and the MARGA Institute (Sri Lanka), among others.

¹¹ Government expenditures in Nepal are more than twice the level of revenues; the shortfall is mostly covered by borrowing from abroad and by foreign grant assistance. [HMG, Ministry of Finance 1992, Table 8.1]

about US \$100 per month for a senior professor, these are grossly insufficient for a Nepalese middle-class standard of living.¹² Predictably, Tribhuvan University has difficulty retaining good staff; some of the most promising scholars resign from the University or become invisible, i.e., remain on the payroll, but devote most of their time to more remunerative outside interests. CEDA has sought to combat this problem by supplementing regular salaries out of revenues received from external contract research.¹³ In recent years, such supplements may have comprised more than three quarters of the total remuneration of those professional and senior administrative staff directly involved in externally-funded research.¹⁴ Nevertheless, CEDA continues to experience difficulties retaining staff, while some other units in the University have been envious and sought to undermine its position.

CEDA has actively sought out and has been awarded research contracts; however, securing such contracts in Nepal is highly competitive. In Kathmandu, there are increasing numbers of small consulting firms or consortia with competent staff (some of whom are on leave or employed "full time" at CEDA), who deliver well-presented reports on time, have low overheads and are flexible and opportunistic. Private consultants lack security of tenure, but rewards for effort exceed those CEDA can provide through salary supplements. To keep its best professional people, CEDA must actively seek out external research funding as well as count on some institutional loyalty. Major administrative effort is required to explore future funding possibilities, to negotiate arrangements, to meet contract commitments in a timely fashion. Inevitably, there are uncertainties and disappointments. Great instability in the flow of external funding has been accompanied by fluctuations in the availability of specific skills internally.

CEDA's comparative advantage in offering training courses derives from its strong research base. No other Nepalese organization has anywhere near the research experience or intensity of CEDA. However, in pursuing a more active and organized training role, CEDA faces three difficulties. First, its training mandate may overlap with other organizations. The Nepal Administrative Staff College has focused primarily on senior civil servants, but has been expanding its activities. Its mandate is limited to the public sector and its orientation is administrative. Special purpose training centres also exist, such as the Agricultural Projects Services Center, and the Local Development

CEDA has actively sought out and has been awarded research contracts.

CEDA's comparative advantage in offering training courses derives from its strong research base.

¹² Low university and civil service salaries are not unique to Nepal. In even more extreme form, they now characterise CIS and some other Eastern European countries, creating strong incentives for corrupt behaviour.

¹³ CEDA has also instituted rules which seek to enforce attendance during normal working hours.

¹⁴ Indeed, in extreme cases, such supplements have exceeded twenty times the normal base salary.

A key question for CEDA is whether the ministries or donor agencies can and will allocate funds to support the specific training initiatives that CEDA is able to offer on a sustained rather than ad hoc basis.

Training Centre. However, since a training vacuum seems to exist in the area of policy analysis, an obvious high-level training niche may be open for CEDA. Second, CEDA's location and facilities put it at a competitive disadvantage. CEDA's building is a pleasant structure with two seminar rooms and a lecture hall, in addition to a library and offices. But it is located on the main University campus at Kirtipur, far from the center of Kathmandu. The area lacks suitable accommodations, and even a reliable water supply. Furthermore, access and communications are frequently disrupted by student demonstrations, which seem to have become endemic since the Nepalese Revolution. Third, there is the key question of financial support. It is not feasible in Nepal to charge trainees; indeed, some donor organizations (such as the Asian Development Bank) that put on training programs in Nepal pay trainees per diems which are a multiple of their regular salaries! A key question for CEDA is whether the ministries or donor agencies can and will allocate funds to support the specific training initiatives that CEDA is able to offer on a sustained rather than ad hoc basis. Securing timely funding decisions is a major constraint on preparing and presenting training programmes. Finally, there is the issue of motivation of individual members of the CEDA professional staff. The opportunity cost of participating in a training programme is often foregone external consulting fees or internal research honoraria. If a significant investment in preparation is necessary or there is a potential that the training programme may not attract a sponsor (other than Dalhousie) or may not yield an adequate honorarium despite attracting a sponsor, then accepting an assignment as a trainer is unattractive. Equally unattractive is cooperation with a Canadian counterpart to develop training modules for future courses for which a sponsor may not emerge.

Constraints facing the Project: ICDS Funding

ICDS projects are relatively small.

Under the ICDS programme, Canadian universities may receive CIDA funding of up to \$200,000 per year over a five-year period to carry out an overseas development project. Thus, compared to projects funded through other CIDA programmes, ICDS projects are relatively small. Moreover, since every project must provide for administration, reporting and project direction, the relatively small ICDS undertakings are characterized by significant economies of scale. In addition, the relatively small size of such projects effectively rules out a permanent Canadian presence in the LDC and the advantages associated therewith, because this option for project delivery would absorb at least two thirds of the funds available for substantive project activities.

The advantages of the ICDS programme are that decisions on funding can be rapid.

The advantages of the ICDS programme are that decisions on funding can be rapid and that some aspects of project execution are relatively free from direct supervision by CIDA staff. Inflexibility in project delivery and reductions in the quality of benefits provided are the major disadvantages of the ICDS programme. These arise from the following

restrictions on project delivery (none of which apply to bilateral CIDA-funded projects):

- CIDA money cannot be used for honoraria to staff from the LDC institution,
- use of professionals from third countries is excluded, thus preventing the use of experts from other LDC's,
- overheads accrue only for Project participants currently employed at the Canadian university; retirees or staff members from other universities do not count,
- Canadian university employees, whether or not from the host institution, are supposed to be motivated by good will alone and accept the hazards¹⁵ and frustrations of Project participation without monetary incentive,¹⁶
- use of Canadian consultants is discouraged; and consulting fees at market rates cannot be paid, and
- no funds can be budgeted for entertainment, even though this may be essential for normal social interaction in the cultural milieu where the project takes place.

Constraints facing the Project: Incentives for Canadian Project Participants

Ideally, Dalhousie should be providing experienced specialists to the Project, who, in addition to their subject-area expertise, either know Nepal already or can devote the time needed for adequate preparation. Dalhousie has a large cadre of professionals who specialize in development. However, as a relatively small university, it lacks some departments, such as agricultural economics, rural development, forestry and geography.¹⁷ Restrictions on the Project's ability to recruit outside Dalhousie reduce flexibility in implementation and make it difficult to attract the most skilled and experienced Canadians for some specialized assignments. A particular difficulty is that teaching staff in Canada are most readily available during the summer months when heat, monsoon

Ideally, Dalhousie should be providing experienced specialists to the Project, who, in addition to their subject-area expertise, either know Nepal already or can devote the time needed for adequate preparation.

¹⁵ From the viewpoint of personal safety, Nepal is an extraordinarily safe country. But Canadian Project participants thus far have experienced gastro-intestinal problems of varying degrees of severity. Without plumbing this issue in depth, at least three instances of amoebic infestation are known to have occurred, and one of giardia lamblia.

¹⁶ Colleagues may simultaneously be receiving generous honoraria under other CIDA-funded projects.

¹⁷ Similarly, its Department of Economics is modest in size and cannot offer specialization in all fields.

A particular difficulty is that teaching staff in Canada are most readily available during the summer months when heat, monsoon rains and the national budget process in Nepal create problems in scheduling activities there.

Seven joint training programmes, covering about 20 weeks in total, had been presented at CEDA by March 1993.

The major area in which the Project's accomplishments have been meagre is longer-term management planning.

rains and the national budget process in Nepal create problems in scheduling activities there. Luckily, Nepal is an attractive and safe country, with very friendly people. With some recruiting effort, the Project has been able to attract for short assignments a number of high quality Canadians and has benefited greatly from their dedication. But these participants are confronted with significant opportunity costs, since the Project offers no monetary advantages and uncertain career benefits. As a consequence, there is an understandable tendency by Canadian participants to limit the amount of time contributed.

Achievements and Current Status of the Project

Despite the problems outlined in the previous sections, which have thus far caused the Project to spend about 20 percent less than budgeted, the Project can point to solid accomplishments thus far, even though these fall short of its more ambitious aspirations. Seven joint training programmes, covering about 20 weeks in total, had been presented at CEDA by March 1993. Roughly 170 trainees have participated. In most cases, one or more sponsors in addition to Dalhousie supported the endeavour, so CEDA has succeeded in securing some external funding for these training activities. No formal efforts have been undertaken to determine the amount learned by trainees or to "follow-up" these trainees in their careers. However, responses to the questionnaires which have been administered in every training programme to date have been highly favourable.

In addition to training activities, Dalhousie has participated in two CEDA-sponsored workshops, and Canadian participants have conducted several seminars or presented lectures. In fact, through careful cost control, Dalhousie has provided about a third more manpower while spending less than the amounts budgeted under its agreement with CIDA. Five CEDA staff members have come to Dalhousie for graduate study and four others have been thus far sponsored for short-term programmes of training in Southeast Asia. Furthermore, CEDA's capability to mount training activities has been upgraded through delivery of four computers and two vehicles.

The major area in which the Project's accomplishments have been meagre is longer-term management planning. Lack of results here has not been for want of effort, however. Indeed, a total of nine planning/liaison trips have been undertaken by Dalhousie or CEDA staff members since the formal inception of the Project. The major stumbling block is that effective, longer-term planning requires assurance of funding and continuity of personnel. These, in turn, depend on political and institutional stability. Such stability has not prevailed in Nepal or at CEDA, nor are prospects bright. CEDA found planning difficult even before the Nepalese Revolution because most of its activities and financial resources depended on outside grants or contracts of an ad hoc nature. The Project exacerbated this situation:

because it in principle cannot support Nepalese human inputs, it either reduces CEDA's flexibility and absorbs some of its very limited discretionary resources or else forces CEDA to try to secure third-party funding in order to carry out its side of joint activities. An exercise in longer-term, management planning requires resource inputs from CEDA, but promises little in the way of assured benefits.

Concluding Comments

Can any droplets of wisdom be distilled from the Project's experience to date? Throwing caution to the wind, let me tentatively suggest four points. First, the salary and incentive structures which prevail -- particularly those in the LDC institution -- crucially influence the prospects for success of attempts at institution-building, such as those promoted under the ICDS programme. Closely related to this point is a second: emphasis on longer-term planning -- an essential activity in a bureaucratic milieu such as prevails in Canadian universities and governments -- may be misplaced if the partner institution is operating in a politically unstable and competitive environment where entrepreneurial behaviour is essential to flourish and perhaps even to survive. Long-term planning, after all, eats up scarce resources; and in an unstable environment, the most carefully crafted plans may be irrelevant and incapable of implementation. Furthermore, bureaucratic behaviour is quite "natural" in many LDC's; what is in desperately short supply is initiative and pragmatic problem-solving. Surely it is these latter qualities that Canadian development projects such as this should be seeking to promote. Third, it is probably a mistake to draw easy analogies from other HRD projects which enjoyed substantially different levels of funding, operated under very different rules and constraints, and were carried out in other, much wealthier countries. A very poor country, like Nepal, may be more resistant to economic progress than middle income LDC's and thus require more effort to achieve comparable results. Hence, the challenges facing HRD projects may differ fundamentally in different countries. Fourth, political instability is a fact of life in many LDC's and is likely to influence development projects negatively. Some instability should be anticipated in designing projects and the impacts of political disruptions should be given due weight in assessing results.

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It should be noted that some major bilateral projects have evolved from ICDS initiatives.

It is premature to attempt to judge at this point whether the Project will make the leap into a bilateral Phase II.

Turning to the future, what auguries regarding the Project does the crystal ball dimly reveal? First, it should be noted that some major bilateral projects have evolved from ICDS initiatives. An example is the health sector project operated by Calgary University in Nepal. Since a bilateral project must fit both the country-specific philosophy and funding constraints of CIDA, such an evolution depends only in part on the perceived success of the initial ICDS project. Thus, despite the constraints that the ICDS programme imposes on project delivery, that programme does provide both an opportunity to get a useful project started and to build country-specific expertise, in addition to providing a somewhat stochastic vetting process. It is premature to attempt to judge at this point whether the Project will make the leap into a bilateral Phase II. Certainly the training needs exist in Nepal, and Dalhousie has built up considerable good will at CEDA and at Tribhuvan University. The Project has made a modest beginning toward addressing some of Nepal's public sector training requirements and has now -- after a slow start -- achieved considerable momentum: three training courses and four lectures have been presented in the last year -- almost half of the total over the entire first four Project years. Perhaps Buddha will continue to smile and Project performance will improve even more in the coming twelve months.

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9

THE BALTIC STATES: DEFINING NEW DIRECTIONS

Introduction

by A.D. Tillett

Try as we may to change geography, we must live with our neighbours and play against our fate with as much collective skill as we can muster. If Canada, for example, lies on a small part of a large double bed mainly occupied by the United States, the Baltic states find themselves in an even less enviable position, caught between the sheets of a crumbling Russia and a renascent Eastern Europe. Yet far from being smothered, Estonia, Latvia and Lithuania have awakened. They are a vivid example of how a sense of history can assert itself, and (perhaps) against the odds, provide a pattern for change.

As some of the richest parts of the former Soviet empire, the Baltics were and are attractive because of the quality of their resources and people. The USSR regarded the three Baltic countries, each of which had their own language, as semi-autonomous provinces. Russia pushed heavy industry and encouraged the in-migration of Russian-speaking people. As a consequence, beginning in the 1970s, there was a national counterthrust, ostensibly to preserve their historic, particularly architectural, heritage from the concrete hand of Soviet planning, and to oppose the industrial violation of their environment. The result was a greater sense of national identity and purpose which ultimately became the thread which unraveled Gorbachev's web of glasnost and weft of perestroika.

The costs of independence can be high. The Baltic states live under the shadow of a Russia which is lurching from policy prescription to political desperation as its own hopes slowly disintegrate or at least fail to materialize. This Russia, however, continues to control the oil on which the Baltic states depend, and remains as the protector of the substantial Russian minorities in each country. Further, they continue to be closely tied to the submerging rouble even where (as in Estonia) an independent currency has been established. And we, (the industrial countries), seem to offer little more than market nostrums as the solution.

The costs of independence can be high. The Baltic states live under the shadow of a Russia which is lurching from policy prescription to political desperation as its own hopes slowly disintegrate or at least fail to materialize.

Against these costs are the quality and talent of the people--well-educated, informed people who are determined to use all opportunities to understand the outside world. We, in Halifax, had the opportunity of meeting twenty-one Baltic people in August and September of last year during the Baltic Economic Management Training Program, an imaginative two-month course for public sector officials which was sponsored by the Canadian Government's Task Force on Central and Eastern Europe. Three from the group wrote analyses of their respective country's current situation; their insight is contained in the following pages. Now that the initial project is over and the group has returned home, we at Dalhousie are left with the view that Canadian universities and other institutions have a valuable, if modest, role to play in one of the great transformations of this century. It is a role which, hopefully we will accept.

LITHUANIA: Training Needs for the New Economy

by Birute Grikinyte

Lithuania is one of the three Baltic states, with a mature history dating back to the 11th century. The current Republic of Lithuania came into being by an Act of government dated March 11, 1990. This proclamation of independence returned Lithuania to independent nation status, ending fifty years of Soviet occupation.

The Lithuanian economy is a combination of industrial and agrarian activities.

Technological and engineering level of enterprise lags far behind the standards of Western Europe.

The Lithuanian economy is a combination of industrial and agrarian activities. With the integration of the Lithuanian economy into the economic system of the former USSR, it developed according to the mandate of the Soviet central planning system and therefore, was guided by the USSR's strategic goals/objectives for economic development. One result of this is that the technological and engineering level of enterprise lags far behind the standards of Western Europe. Another result is that trade is almost exclusively within COMECON and, as of the end of 1992, it is still linked very much with the former Soviet Union. Approximately 80-85% of Lithuanian imports and exports were with Russia and other parts of the former Soviet Union in 1992.

The main industries in Lithuania are: power engineering and fuel, machine building and metal-working, chemicals and petrochemicals, forestry (including pulp and paper), building materials, lightfood, and agriculture. A majority of these industries depend on raw materials imported from the former Soviet Union.

Since independence, the Lithuanian government has initiated a major program of economic reforms. These reforms incorporate a mandate which emphasizes a free market system. The government recognizes that significant change is required for economic reform to be successful. It also recognizes that this reform requires a dramatic change in the economic role of the state. The reform package is a comprehensive one, touching virtually all spheres of the domestic economy, the most important of which are industry, agriculture, finance and banking, the monetary system, and international economic relations. Specific policies deal with privatization, restitution of property rights, liberalization of prices, promotion of competition and taxation reforms, among others.

The reform package is a comprehensive one, touching virtually all spheres of the domestic economy.

A new banking system was established in 1990. The Bank of Lithuania was established as the central bank; it was created to help facilitate the adjustment process and the move toward a market economy. One of the Bank's mandates is to establish and implement a two-tier banking system; however, the Bank of Lithuania also engages directly in commercial activity, which is not typically characteristic of central banking systems in other countries. The Bank of Lithuania has thirty commercial branches located throughout the country. In addition, there are two other state banks (besides the Bank of Lithuania), and about 20 commercial banks that engage in commercial banking only. The latter have been started primarily since the economic reform program was introduced after independence.

The Bank of Lithuania cannot yet become a full-fledged central bank as the monetary system is still based on the Soviet/Russian rouble. It is very difficult, if not impossible, to operate an independent monetary policy when only 1% of the total rouble zone is of direct Lithuanian interest. Lithuania suffers from domestic inflation and from imported inflation from the other parts of the former Soviet Union. Since late 1991, the Bank of Lithuania has been actively preparing for the introduction of Lithuania's national currency, the "litas," which was the name of the Lithuanian currency before the Soviet occupation.

The government recognizes that significant change is required for economic reform to be successful.

The above discussion exemplifies the challenges Lithuania faces and the many elements of the Lithuanian economy that will require reform. Further, however, the type of necessary restructuring that is called for highlights the expertise that will be needed in order to effectively enact these reforms.

All of these significant changes will take place even while the former Soviet influence continues to interfere with Lithuanian progressive reform policies. The successful implementation of these reforms

requires skillful and open-minded people. The transition period now underway has brought into the public sector new, mostly young, people, most of whom are university graduates. These graduates, for the most part, have insufficient experience for the positions they now occupy; they are too inexperienced and untrained for the tasks they now confront. One of the biggest challenges now faced is to retrain, and even re-orientate, people according to Lithuania's new and changing environment.

Many donor-countries have come to Lithuania offering help and assistance to overcome existing difficulties.

Many donor-countries have come to Lithuania offering help and assistance to overcome existing difficulties. Part of this assistance is often provided in the form of training and education programs. In some cases, Lithuanians from different fields have been offered the possibility to visit western countries and observe systems that seem to work. Gaining experience and observing different systems of management in this manner can be an essential and profitable investment.

A Case Example: The Baltic Economic Management Training Program

The Baltic Economic Management Training Program was organized by Dalhousie University in August- September 1992. It was one part of the Canadian Government's technical assistance program for the Baltics. The program consisted of two parts: academic and practical. The former included basic economics, English language lessons, special topics, meetings with representatives from the IMF and the World Bank and field trips to development projects in Nova Scotia.

This part of the program was useful in three major respects. First, the training environment provided for useful practice of the English language; it allowed us to get used to new surroundings and to find out about Canada and in particular Nova Scotia; we were given the opportunity to refresh our understanding of some basic economic concepts; and it provided the opportunity to learn new concepts and share one's point of view with representatives from the other Baltic countries.

Second, it was possible to study more specific topics, according to one's field of interest. We collected useful written material on specific issues, clarified concerns regarding international organizations, namely the IMF and the World Bank, and studied specific subjects according to our respective job responsibilities back home.

Third, once again it was proven that there are no ready answers or "recipes" that outline what should be done to guarantee economic success. We came to realize that a plan of economic development for one country may not necessarily be applicable to another country.

We gained new ideas and notions by studying various topics based on the Canadian experience. This was a useful exercise as it allowed us to examine policies that may possibly be applicable, with variations, to our system. In this regard, learning about mistakes or the outcome of efforts when the wrong decisions are made was very helpful; hopefully, we will avoid these errors ourselves.

More language training might have been desirable, especially if it had been linked more closely with our topics of interest. It would have been helpful, also, if there had been more hours allocated for specific topics of interest; for example, in my case, I would have benefited from more instruction in money and banking.

The second part of the programme, meetings with representatives from different federal/provincial government institutions, complemented our understanding of governmental structures. Respective fields of responsibility and inter-governmental relations were examined during the placement phase of the programme. These meetings were very useful, as one could draw contrasts with institutions engaged in similarly related activities in our country. I wish I could have spent more time with the Bank of Canada; however, it was understandable that it was not very easy to make these arrangements. I found it useful to receive material about institutions prior to visiting them. Advance readings made the meetings more effective, as one could avoid very general questions and concentrate on clarifying issues that were more difficult.

The most interesting part of the program in certain respects was the concluding visits to provincial (Nova Scotia) government institutions, private companies and Henson College. This latter part of my program was devoted to issues of training and retraining. For instance, it was very interesting to learn about the functions of the Civil Service Commission, which could be applicable, to some extent, in Lithuania, especially their management training programs.

For myself, there were many benefits ensuing from the program, and these benefits exceeded my particular field of specialization. It was a very rich experience to communicate with Canadians and experience their culture. It enriched our knowledge about people from the West and more generally, of those from "affluent societies." A very important finding was that we are very similar in basic human values,

Third, once again it was proven that there are no ready answers or "recipes" that outline what should be done to guarantee economic success.

Gaining experience and observing different systems of management in this manner can be an essential and profitable investment.

Training is not a magic solution to Lithuania's problems. But it is a necessary element if the right policies are to be chosen and implemented in the appropriate way.

and our systems of values seem to mirror similar priorities. I sincerely hope that by being in Canada and by meeting with different people we were able to expose Canadians to our part of the world, our homeland, in Eastern Europe. I was proud to represent my country and valued very much the assistance offered by Dalhousie University and their attempts to do their best. Their hospitality was stupendous.

Conclusion

This brief description of the Baltic Economic Management Training Program provides some reflections, from a personal perspective, on the program itself and underlines the important role which this type of training program can play for Lithuania at the present time. Training is not a magic solution to Lithuania's problems. But it is a necessary element if the right policies are to be chosen and implemented in the appropriate way. The old system did not provide the basis or the experience for defining and making the choices now confronting us. With more of the type of training provided by the BEMTP, we will be better able to address our problems and seek out our own solutions.

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ESTONIA: An Agenda for Change

by Ulle Ehatamm

On September 20, 1992, the first democratic presidential and general elections in the last 50 years took place in Estonia.

In the first round of presidential elections, no candidate, out of four people running for the office, received more than 50 percent of the votes, the necessary requirement to be elected. Therefore, the newly elected Parliament had to choose between the two leading candidates--Arnold Routel, the Chairman of the Supreme Council, (95,743 votes in the first round), and Lennart Meri, the Ambassador to the Republic of Finland and the former Minister for Foreign Affairs (138,317 votes). The Parliament elected Lennart Meri as President. As a result of the parliamentary election, a coalition government was formed and took office on October 19, 1992.

In keeping with the aims of the country over the last couple of years, the new Parliament and government have declared their main aims to be:

- to strengthen the independence of the country;
- to build a constitutional state;
- to defend the newly emerging democracy.

Although Estonia has made great strides with respect to each of these objectives in the last few years, there is still much to be done. The new government continues to face major challenges.

First, we have to achieve real control over our borders and form our own defence force. Approximately 10,000 - 15,000 Soviet soldiers remain in Estonia. (Different sources give different numbers; Russians, for instance, speak about 30,000.) These are a continuing threat to Estonian independence. One could, in fact, debate just how independent Estonia actually is with a foreign army in its territory without consent. Estonians appreciate the difficulties Russia faces when trying to find proper living quarters for its troops, but this cannot be used as an excuse for keeping these troops in Estonia indefinitely. Therefore, the government demands the unconditional and swift withdrawal of the Russian army from Estonia.

Order must be guaranteed not only on the borders of the country but also inside it. New civil and criminal legislation, corresponding to present day European standards, must be adopted. In fact, all existing legislation needs to be reviewed and, if necessary, revised in light of the new Constitution and the widely recognized principles of international law. To stop the rapidly rising crime rate and to make society safe for ordinary people, judicial reform and changes in the system of legal protection need to be implemented in the near future.

An important part of building an independent Estonia is the policy on national minorities and citizenship. As a result of almost 50 years of Soviet rule, there are approximately 600,000 foreigners in the country (about 39 percent of the population). In 1934, Estonians constituted about 88.2 percent of the population. By way of comparison, in Germany, foreigners make up about 7 percent of the population; but almost every day, newspapers report on German protests against foreigners and even violence towards them. Irrespective of Russian accusations of civil rights violations, the German experience is not observable in Estonia. There is a difference between civil and civic rights. Citizenship and all the rights and obligations that go with it belong under civic rights. Specialists in international law regard the Estonian law on citizenship as one of the most liberal in Europe--one has to have lived in the country for three years, pass a language test (1,500 words), and swear an oath of loyalty to the country in order to become a citizen. These are not unreasonable conditions for Estonia to insist upon.

No country has ever been faced with what the former socialist countries are trying to do today--to turn back to a capitalist path of development after several decades of socialist experiment.

The Constitution rules that the task of the Estonian state is to guarantee survival of the Estonian nation and culture while securing human rights and freedoms for every inhabitant of the country, irrespective of their nationality, religion, language or citizenship. Therefore, in terms of the future of Estonia, it is extremely important to integrate other nationalities into Estonian society and culture as loyal national minorities. One step towards this would be the re-establishment of cultural autonomy for nationalities living in Estonia today.

Change in Estonian society requires a thorough administrative reform of government. Weakness of local authorities can seriously hinder economic and social reforms. Therefore, decentralization and delegation of decision-making power to bodies close to the people are essential. To continue the reform, new local elections must be conducted some time next Spring. Before that can be done, local authorities must be given a proper income base, i.e. state and local budgets must be separated, and their rights and obligations have to be determined.

It is vital that all the aforementioned reforms be implemented. Their implementation has direct implications for the state of the economy in the near future.

Economic Change

It must be admitted that the overall economic situation does not look good. Introduction of our own currency, "the kroon," in June, 1992, did not stop inflation. Indeed, inflation since June has turned out to be higher than expected. Some economists say this is due to so-called supply shocks, cases where, due to crises (e.g. oil crisis in the 1970s), production costs are driven up and consequently, prices rise accordingly. As the old regime of controlled prices is dismantled, strong supply shocks are being experienced in the economy.

Another factor which has influenced the rate of inflation is the increase in the price of imported goods. One of the reasons for this is the large increases in Russian prices which have been taking place; Russia continues to be the principal source of raw materials and fuel supplies in Estonia. Finally, the restructuring of the economy demands new technology, raw materials of good quality and enormous investments, all of which have added to the pressure on domestic prices.

At the moment, many products remain in warehouses unsold as people cannot afford to buy them. The cost of living during the first six months of 1992 (compared to December 1991) rose 5.5 times while the average wage went up only 3 to 4 times. The collapse of the socialist

One of the cornerstones of economic change in Estonia is property reform and privatization.

economy has resulted in a considerable worsening of the living standards of the people, on average, at the present time. Elderly people and young families with children are in an especially difficult position. Industrial production decreased 43 percent during the first six months of 1992. GNP decreased about 30 - 35 percent in 1992 compared to 1991. Many factories have been forced to close. Bankruptcies are expected to increase as is unemployment, which is currently estimated at 5 - 6 percent of the labour force.

The answers to such problems are not easy to find. Raising minimum wages is obviously not the solution. Part of the answer lies in introducing measures against monopolies in production and trade. Inflation could be brought under better control if many companies being artificially held afloat were allowed to go out of business. Exceptions should be made only if bankruptcy may turn out to be more expensive than continuing to subsidize the company. There must also be a consistent labour policy and retraining programs for the unemployed.

One of the cornerstones of economic change in Estonia is property reform and privatization. There is no alternative to quick privatization. Therefore, it is regrettable that it has not been advancing at the pace that was expected.

One of the cornerstones of economic change in Estonia is property reform and privatization.

The aim of privatization should not be to earn money for the state but to turn as many people as possible into real owners. Over the next year, the sale of big state corporations will start through open auctions and small-scale privatization will be advanced more quickly.

Privatized enterprises need capital investment to modernize their production plants and to take their products to the world market. But sufficient domestic capital investment is lacking in Estonia at the present time. Hence, it is unavoidable that foreign investors must be invited to play a significant role in the new economy. In addition to privatization and encouraging foreign investment several other steps need to be taken.

First, in order to create favourable conditions for entrepreneurship, a variety of laws relating to conditions and control of business have to be adopted (e.g., laws on insurance, laws on real estate, laws on contracts, laws on competition, etc.).

Second, the existing tax system is in need of change. Taxes must be lowered. It is widely believed that the present tax system suppresses entrepreneurship and does not guarantee that taxes are paid into the state budget. Tax reform should focus on taxing consumption rather than

Postponing reforms will only prolong the difficulties, even though the short term adjustment costs may be high.

taxing income. Any income tax on individuals should be proportional. Changes should be introduced also to the corporate income tax. The rate of corporate income tax should not be considerably higher than the income tax rate for individuals. In order to ease the tax burden, investments in production should be deducted from taxable income and the existing restrictions on sponsoring culture, education and social activities should be reassessed.

Third, to help keep the budget balanced, and through this to achieve stability of the currency, taxes on land will be introduced this year and a tax on capital gains will be considered.

What we need is for the Western countries to share their experience of democracy with us and to help train our best people to understand and work in the new environment we seek to create.

Whether tax reform, in combination with reducing and rationalizing government expenditures, helps to keep the impending huge government budget deficit under control or helps currency circulation, remains to be seen. But certainly these tax reforms are necessary, if not sufficient, actions to be taken. Postponing reforms will only prolong the difficulties, even though the short term adjustment costs may be high.

Integration with Europe, and through it, to the world, is one of the main aims of Estonian foreign policy. We seek membership in international organizations and contacts with Western countries. Through such integration and cooperation, we can accomplish what we have set out to do--to build a prosperous democratic society. Time has not stood still for the last 50 years; the world has changed. To be able to integrate successfully into that changed world, we need to know more about it. That is where countries like Canada, for instance, can help us. We are comparatively poor. But this does not mean that the West has to feed us. We are able to do that ourselves. What we need is for the Western countries to share their experience of democracy with us and to help train our best people to understand and work in the new environment we seek to create.

Although our problems are not so different as they may seem on the surface, we recognize that we cannot simply copy the solutions of more developed countries. What has worked for them will not necessarily work for us. No country has ever been faced with what the former socialist countries are trying to do today--to turn back to a capitalist path of development after several decades of socialist experiment. We know there are no ready solutions to our problems. But with the help and support of the West, and by working within the region with Latvia and Lithuania, Estonia will find its way.

LATVIA: An Overview of Adjustment

by Juris Kanels

Latvia currently has a mixed economic profile, with heavy industry accounting for the largest share of gross national output, followed by light industry and agriculture. Currently smaller than manufacturing, the service sector is presently experiencing substantial gains, especially in financial services, tourism and transportation.

A substantial number of Latvia's industries are supported by its domestic natural resource base. Government plans to foster development of those industries utilizing Latvia's natural resource base make these areas especially attractive for foreign investors, seeking either to modernize existing enterprises or to develop new ones. It is important to mention here that there has been a considerable concentration of technologically advanced production in Latvia; it also has extensive electro-mechanical and electronic industries.

Forestry plays an important part in the economy of Latvia. Wood products are sold both to eastern and western markets, and it is one of the areas with the greatest potential for further development. But it is also one of the areas most in need of foreign investment. Outdated equipment is responsible for wastage in every stage, from cutting to finished product. A large part of exported timber is currently in the round log state due to the limitations of most of Latvia's saw mills and pulping facilities, which are outdated. Massive investments will be required in machinery for the economic management of forests and for various types of board manufacturing, saw mills and other wood working industries, as well as for the upgrading of existing pulp and paper mills and, possibly, the construction of new ones. The Latvian furniture industry is also a major user of Latvian forest products. While the quality of furniture produced by Latvian manufacturers is already on a par with western products, and substantial exports to the west already exist, further investment is needed for modernization aimed at increasing production in existing facilities.

Latvia has a historic tradition of being an international transit centre...

The reform and privatization of agriculture in Latvia has proceeded at a much faster rate than in its neighbour republics. It is estimated that within the next few years, 75% of all agricultural land will be transferred to private ownership. Plans for assistance in agricultural reforms and modernization have been forthcoming from the European Community (EC), which plans to provide technical assistance to evaluate sector strategies and internal organization, and to finance a number of economic and institutional studies on the transition to a market economy, land use, property rights and rural financial

institutions. The greatest investment opportunities exist in the modernization of large-scale animal production units and renovation of processing industries. However, the market for Latvian-produced food is seen as primarily in the East. The main chance to enter Western markets is with ecological produce, the demand for which has been rising steadily in the West. Since the contamination degree of Latvian soil is comparatively low, and at present it is experiencing a shortage of chemicals, which have to be imported for hard currency, a recently proposed plan to convert at least a part of Latvian agriculture to ecological production seems very appealing.

The basis for a good legal environment has been created by adopting new business laws and a law governing foreign investment.

A big advantage of Latvia is its geographical position. From a logistics point of view, Latvia can easily find its place in an integrated European transportation system. With its relatively well developed road and rail networks and ice-free ports, Latvia already has a good base for a comprehensive transportation and distribution system that could serve all of its neighbours to the East and the West. Latvia has a historic tradition of being an international transit centre and played a large role during the Soviet period as a major export centre for Soviet commodities flowing West. Rapid modernization of the existing infrastructure in Latvia, linking Latvia through an Integrated Transport Centre with other major centres of Europe, could alleviate rapidly mounting pressures on existing European transport systems, and provide a vehicle for the expansion of trade with the areas of the former Soviet Union. This would allow Latvia to resume its gateway role between the West and the East--a role which it has traditionally played over the centuries.

Latvia intends to comply with basic principles for commercial shipping and transit, including:

- facilitating customs and clearances
- liberal tariff policy
- no transit taxes
- no flag discrimination.

Latvia hopes to develop a comprehensive transportation plan in the future, which will include the development and modernization of its ports, development of a trans-Baltic motorway, the *Via Baltica*, the modernization of the rail system and overall integration of the transportation system of Latvia into Europe. It is also estimated that this system could become one of the major sources of hard currency earnings for the republic. The rail system and the ports can earn close

to one billion dollars annually. As in other sectors of Latvian industry, substantial opportunities again exist for western investors, primarily as partners furnishing capital for renovation and modernization of existing facilities. The established success of Latvia's transport systems and the high level of hard currency earnings also offer an attractive pay-back period for investors.

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The Role of Foreign Investment

The notably cheaper yet comparatively highly skilled workforce, relatively low prices of raw materials and low taxes in Latvia, define an attractive set of opportunities for interested foreign investors.

In order to encourage foreign investment, the Government of the Republic of Latvia has focused on the development of a favourable regulatory structure, the security of property rights and the development of an infrastructure appropriate for international business, including:

- financial services
- communications
- modernization of the existing transportation network
- expansion of service industries, especially business services.

Though Latvia has not as yet elaborated a Business Code, the basis for a good legal environment has been created by adopting new business laws and a law governing foreign investment. These laws allow for the development of several forms of private companies, analogous to those in western countries, namely, joint stock companies, shareholders' associations, partner-ships and limited liability companies. The main lines of the Foreign Investment Law are:

- the state encourages foreign investment in the Republic of Latvia, as well as provides equal treatment under local laws;
- the state cannot expropriate foreign investment, except in extraordinary cases, when investors will be fully compensated for their losses in hard currency;
- the state envisages tax benefits to foreign investments in certain areas of development in Latvia, for example, in those in which, to decrease raw material imports,

production is mainly supported by Latvia's natural resource base of limestone, gypsum, dolomite, peat, timber and others.

The Council of Ministers of the Republic of Latvia has identified a number of sectors as priority areas for foreign investment.

The Council of Ministers of the Republic of Latvia has identified a number of sectors as priority areas for foreign investment to which the above mentioned tax benefits apply. The top priorities are:

- energy
- banking, financial, stock and commodity markets and insurance systems
- transportation
- agriculture and agricultural infrastructure
- private business development.

Other areas earmarked for investment are:

- wood processing, pulp and paper industry
- construction materials and recycling of raw materials
- biotechnology and medical equipment
- electronics manufacturing
- telecommunications
- environmental protection
- economic, legal, academic and business education, and the training of civil servants
- tourism infrastructure.

Under the Foreign Investment Law, companies owned either in whole or in part by foreign investors may be eligible for tax breaks for up to a full eight years, starting with the first year where a profit is made, and with up to three of those years being completely tax free. Properties or technology to be used in the operation of the enterprise can be imported tax free. A full repatriation of profits is allowed.

The general principles of taxation are stipulated by the so-called "umbrella act," "On Taxes and Duties in the Republic of Latvia." This sets out the kinds of taxes imposed in Latvia, objects of taxes, payers responsibility, procedures of arbitration, etc. The fiscal taxes are as follows: profit tax, property tax, excise tax, value added tax, income tax and land tax. A social tax and natural resource tax are collected for specific budgets and funds.

The Republic of Latvia has made the necessary provisions to maximally foster export activities by applying a zero tariff to goods and products exported from Latvia, with the exception of metals, timber, hides and mineral resources recovered in Latvia. Import tariffs took effect on November 1, 1992, and are paid in Latvian roubles or other currency according to the exchange rate established by the Bank of Latvia on the day of payment. Import tariffs do not relate to transit and re-export, nor to human assistance. For all countries with which Latvia has concluded trade agreements or to whom it has granted a preferential status, the import tariff for goods and products is 15%. For those to which these conditions do not apply, it is 20%, while a zero tariff is set for imports of grain, medical equipment and pharmaceuticals, as well as for imports of raw materials and assembly parts to be used in the manufacturing of finished goods in Latvia.

Banking and Monetary Reform

A well developed banking infrastructure and set of services is a very important prerequisite for a successful and uninhibited flow of foreign capital into various sectors of Latvian industry where investment is most welcome. The Bank of Latvia was formed in July 1990 by amalgamating all state banks into one central unit. As of October 1992, forty-one new commercial banks have already been licensed by the Bank of Latvia. Of these, twenty-eight have already established associate banking agreements with western banks and are able to offer the foreign investor western banking services and transactions with their banks in the west. Hard currency accounts are available. However, credits are granted only to Latvian residents against some collateral. The recently established Bank Service Europay Centre, working in close cooperation with Eurocard International, is developing an infrastructure for a high quality service centre for credit card acquirers and issuers. At present, Eurocard and Mastercard acceptance, voice authorization and transaction processing are available in Riga.

A well developed banking infrastructure and set of services is a very important prerequisite for a successful and uninhibited flow of foreign capital into various sectors of Latvian industry where investment is most welcome.

The Bank of Latvia is currently still involved in providing public banking services. However, its main goal will be the regulation of the growing number of new commercial banks and the development and

control of a new currency, "the Lat," the introduction of which depends on the macroeconomic measures aimed at establishing a relatively stable and noninflationary economic environment. In July, inflation was about 20%; in August, 16%; in September, 12%. The Bank of Latvia has been pursuing a strict policy of limiting the issue of the Latvian rouble, in spite of the constant demand of the Government to the contrary in order to cope with credit resource problems. However, the marked intent of the Bank of Latvia is to introduce the lat only when the inflation rate is decreased to about 1.5% per month. At present, the efforts of the Bank have yielded comparatively good results. In June, when the Latvian rouble was introduced, its exchange ratio against the Russian rouble was 1:1; now it is 1:2.

A well developed banking infra-structure and set of services is a very important prerequisite for a successful and uninhibited flow of foreign capital into various sectors of Latvian industry.

The IMF estimate of the necessary balance of payments support for Latvia is US\$ 360 million, and it has been agreed that G-24 and IMF will meet this balance of payments shortfall with 300 million as a long term soft loan, lending an additional 60 million on a short term basis. Important steps in the preparation for monetary reform have already been made--price liberalization, first steps of privatization, new tax laws and a reorganization of government administration to make it accord more with the needs of a market economy. However, at present the banking sector still needs severe improvement. Bank employees are being trained in western banking methods through banks with whom associate banking agreements have been signed and further training in the practical aspects of corporate finance, capital markets and merchant and investment banking is planned. Besides, a recently adopted law stipulating significant local accounting changes will take effect in 1993. This would adopt a combined Danish/German standard and is planned to meet EC regulatory requirements and standards. The banking sector also needs large capital investment for the development of a comprehensive communications network, as well as the necessary hardware and office equipment.

In this and other sectors Latvia is receiving technical assistance from the European Community — the PHARE program, the EBRD — the IMF and the World Bank.

Privatization

As one of the main objectives in the transition to a market economy, the Government of Latvia has acted to ensure the existence of various forms of property, demonopolization and acceleration of private enterprise development, including privatization which at its first stage embraces the following:

- objects of property of rather low value sold to individuals

- branches supplying the market with goods and services
- branches of economy with a relatively fast flow of capital.

Privatization of industry has started with small enterprises (up to 300 workers). Privatization of medium size and large enterprises is being carried out by transforming them into joint stock companies or shareholders' associations with an open sale of securities in stock-exchanges to both Latvian and foreign investors. By the middle of 1992, 13,500 small and medium size enterprises in agriculture, industry and the commercial sectors and 35,000 private farms were operating in Latvia.

With the temporary exception of land ownership, none of the approved laws and regulations preclude the participation of foreign investors in privatization. Foreign investors may buy, for hard currency, state and municipal property through auctions or tender. They may invest in joint stock or limited liability companies, lease an enterprise with option to buy it, or buy selected assets being liquidated. For these last methods, they may negotiate payments that are not exclusively in hard currency, including payment in lat (after its introduction) and vouchers for compensation for past assets.

As to the large enterprises, six big state enterprises have already been privatized. In the course of 1993 the Government plans to privatize several hundred more industrial enterprises. Additional guarantees to foreign capital in Latvia would be created by the possibility to buy land. The law on the sale of land to foreign investors is being drafted now. However, one must understand the psychological barriers that prevent the inhabitants of a small country from selling their land to foreigners. Yet there is hope of a positive solution. At present the main option seems to be to lease land for up to 99 years.

With the temporary exception of land ownership, none of the approved laws and regulations preclude the participation of foreign investors in privatization.

Apart from the local legal environment, it is very important that other legal factors are in place as well, namely, bilateral and multilateral international agreements--on mutual protection of investments, against double taxation, bilateral treaties on trade and cooperation, as well as tax conventions and the like. A very important event was the signing of a Trade and Cooperation Agreement with the European Community. At present, Germany and Latvia are negotiating an investment protection agreement and a double taxation treaty.

Conclusion

A great amount of political strength and courage on the part of the Government is needed during this difficult transition period in Latvia. A great deal of interest, courage and willingness is needed to re-explore Latvia, restore the age old economic and cultural ties between our countries, and to come to Latvia, where you will feel more at home than you can now imagine.

Baltic Economic Transformation in the Post-Soviet Era

by Barry Lesser

The economies of the three Baltic Republics of Estonia, Latvia, and Lithuania are in the midst of a profound transformation, aimed at undoing much (indeed most) of the last fifty years of economic change. This transformation partly reflects the phenomena sweeping other parts of Eastern and Central Europe and partly, circumstances peculiar to the Baltics themselves.

At the general level, economic change in the Baltics reflects two overall trends common to virtually all of Eastern and Central Europe:

- a process of political liberalization which has, in turn, given birth to a process of economic liberalization; and
- a movement away from pervasive government-led economic development and control to greater reliance on market-led development and organization of the economy.

*The Baltic experience
reflects a fifty year struggle
to regain independence.*

Within this general framework, the Baltic experience also reflects a fifty year struggle to regain independence. Like the Baltics, many of the Soviet satellites of Eastern and Central Europe viewed themselves as occupied territories. But the Baltics were not just satellite countries within the Soviet hegemony; they were annexed and treated as part of the Soviet Union itself. They retained no semblance of sovereignty as did Poland, Hungary, East Germany, etc., however nominal such sovereignty might have been in practice.

When the process of political liberalization commenced in the USSR, it provided a window of opportunity for the Baltic states more vigorously to pursue their independence ambitions. While the fight was neither easy nor without casualties, it did succeed, both because the political circumstances of the Soviet Union at the time were favourable (in a

relative sense) and because the desire for independence became a reliable base for political action.

Importantly, in the Baltics, as in other parts of Central and Eastern Europe, political liberalization came first; economic liberalization followed and has yet to become as complete. Moreover, to a significant extent, it was the independence movement, not political liberalization per se, which drove the process of initial political change in the Baltics. It was not economic change which caused political change. Rather, it was the reverse. This is highly relevant to an understanding of at least some of the problems which have been encountered since independence was regained, as well as some of the post-independence political developments which have occurred.

The process of political liberalization in the USSR provided a window of opportunity for the Baltic states to pursue their independence ambitions.

Within the Soviet system, the Baltic economies were fully integrated into the Soviet national planning structures. Placement of industries, trade flows, movement of workers, prices, currency--all of these were a function of bureaucratic decision-making rather than a response to market forces. One of the necessary implications, then, of introducing economic liberalization is that the existing pattern and structure of industry, the labour force, trade, etc. is unlikely to fit that which is dictated by the new economic framework. The outcomes are not independent of the decision-making regime; changing the latter is bound to change the former.

While many were clearly unhappy with the results of the Soviet planning system, there was not, in many cases, a clear sense of the economic adjustment required in cutting political ties to the Soviet Union and proceeding with both political and economic liberalization all at the same time. Any one of these events might have occasioned major adjustments in the economy. All three together have resulted in massive dislocation.

The adjustment currently taking place will not go on indefinitely. At the end, i.e., in the economist's proverbial "long-run," the Baltic economies will emerge stronger and more competitive on the world scene. The long-term prospects are good, at least relative to the starting point under the Soviet regime. But as John Maynard Keynes once remarked, "In the long run, we are all dead." Politically, can they wait or, put differently, can they survive the waiting period?

Dealing with Adjustment

There are two key issues to be addressed:

- how to get through the adjustment period at the least cost, particularly in terms of human suffering; and
- determining the role which is to be played by government relative to the pace and content of the adjustment process itself and, in the longer term, within a more market-dominated system.

There are no easy answers to either of these issues. A number of further observations can be made, however, which underline the complexity of any potential solutions.

1. The Soviet system, for all of its faults, did provide a minimal social safety net for all citizens, including education, health care, housing, and a pension. For some people, especially in some regions, describing these as "minimal" may be an understatement, but there was, nonetheless, a commitment which was understood by the people. In the new order, this safety net is threatened at precisely a time when the vulnerability of many is increasing dramatically. In part, it is threatened for ideological reasons; the fact that socialism is deemed to have failed is taken by many to mean there should now be the wholesale withdrawal of government from the socio-economic sphere. In part, it is threatened for pragmatic reasons; current governments do not have the resources to pay for social change.
2. For fifty years, Baltic trade patterns, indeed the entire structure/configuration of the economy, was based on looking to the east, i.e., into the Soviet Union. The breaking of political ties with the Russians has disrupted the pattern of trade and industrial specialization. Russia's own adjustment problems have further exacerbated the situation; the status quo of the last fifty years is no longer acceptable or desirable for either side. There are both political and economic pressures causing existing trade and industrial patterns to break down.

The Soviet system, for all of its faults, did provide a minimal social safety net for all citizens ... In the new order, this safety net is threatened at precisely a time when the vulnerability of many is increasing dramatically.

Initially, the independence movement itself led to a desire to break Soviet/Russian links as quickly as possible. As well, there was a political need to reduce the degree of economic dependence on Russia for strategic reasons, particularly in terms of the continuing dispute with Moscow over withdrawal of Russian troops from Baltic soil and the leverage which Russia has in this dispute by

virtue of the threat of withholding oil supplies and other essential materials. But whereas existing links can be broken very quickly, new ones take much longer to establish. This has added to the short term hardship.

The question of economic relations with Russia is not an easy one to answer. First, it is not for the Baltics to unilaterally decide the relationship. Second, by almost any objective standard of assessment, most of the previous or still existing links with Russia are not viable in the long run. If adjustment is inevitable, is there virtue in prolonging it? Third, new links with Russia may be forged but, in principle, the potential superiority of these versus other market alternatives remains to be proven.

In an immediate sense, the breakdown in economic relations with Russia is unquestionably adding to current adjustment problems, particularly in key areas such as energy supply. The recent elections in Lithuania (November 1992) were decided, in part, on the basis that people believe, rightly or wrongly, that better relations with Russia will improve the desperate state that many find themselves in at present.

3. The economy itself must be fundamentally rebuilt, based as it is around the Soviet model of huge production facilities within an integrated national production plan and given the tremendous technological gap which opened up between East and West in the last twenty to thirty years. Goods are inferior in quality in many cases and not price competitive. There is little or no knowledge of marketing skills or techniques. Labour, in many cases, is well-educated but lacks a strong work ethic in the paid labour sector and/or has very low productivity because of technology and the way in which production is organized.

There are many in the Baltics, as elsewhere in Eastern and Central Europe, who believed that, under the new order, they would go on doing what they were doing before but trade now with the West rather than the East. That has clearly been shown to be an unrealistic and naive view.

Restructuring on the scale called for will require large infusions of Western capital as well as Western technology.

Restructuring on the scale called for will require large infusions of Western capital as well as Western technology. One must remember, however, that these are economies that were/are already industrialized. In this sense, the development problem they face is fundamentally different than that faced by most Third World

countries. The issue here is how to transform an existing industrial plant, not how to create one.

The Baltics have suffered in a relative sense by being seen as somewhat peripheral in the overall picture of what was the Soviet Union.

Foreign capital inflows will not occur in sufficient magnitude unless certain conditions are met. These include a legal structure which establishes and protects private property rights. It also includes the establishment and/or reform of financial markets. These elements did not already exist and still need to be fully developed. Until they are, foreign capital will remain below the level required by the adjustment process. Added to this are fears about political instability/unrest, particularly, in the Baltic case, fears of Russian intrusion, fueled in part by the continuing presence of large numbers of Russian troops on Baltic soil. Finally, the Baltics have suffered in a relative sense by being seen as somewhat peripheral in the overall picture of what was the Soviet Union. The Baltics can do little to influence this perception in the short run. But the other two, and especially the first, are ones which can be influenced and must be if more foreign capital is to be attracted to the region.

The Baltics had taken significant steps toward their independence well before the general break-up of the Soviet Union. Had the Soviet Union stayed together longer, the Baltics would probably have benefited tremendously by becoming a showpiece for the United States and other Western governments seeking to demonstrate the superiority of capitalism to the rest of the Soviet Union and for those looking for a point of entry to the Soviet marketplace. Once the events of the last half of 1991 unfolded as they did, with the result that very quickly, all the Soviet republics, including Russia itself, became open for business, the Baltics lost this strategic advantage. Thus, despite the fact that the events of August 1991 in Moscow allowed the Baltic republics to declare their full independence, the fact that the same August events set the entire Soviet Union on the road to dissolution, in the long run, probably was to the Baltics disadvantage.

The process of privatization has been proceeding at a much slower pace than originally expected in all three Baltic countries.

4. The process of privatization has been proceeding at a much slower pace than originally expected in all three Baltic countries. Progress in privatization has been slowest with large-scale enterprises, while it has been fastest and most successful with small scale enterprises, such as retail stores. The latter is not unimportant but cannot be the basis for the restructuring and revitalization of the economy on the scale required. There has been a preoccupation with trying to realize as much as possible from the privatization process in terms of receipts for government. This has led to considerable effort being devoted to asset valuation and has led, to some extent, to a

format of one-by-one sales. There has also been a reluctance to put enterprises up for sale by tender. These factors have contributed to the slow pace of privatization while reinforcing unrealistic expectations about the financial and economic returns from the privatization process. Privatization must be seen as essentially a reform/restructuring initiative. The immediate financial proceeds for government are incidental to this goal and should not be allowed to dictate policy.

5. One final set of observations relates to human resources in the Baltics. First, the reform/ adjustment process will exact a large price in terms of human suffering and hardship. A key role which the international community can play in the adjustment process is to provide resources/ assistance to ameliorate this hardship. If the level of hardship increases beyond some (unspecified) point, the adjustment process will falter.

The reform/ adjustment process will exact a large price in terms of human suffering and hardship.

Second, the Baltics do possess a relatively well-educated, skilled labour force. In the longer run, this represents a major advantage over developing countries in, say, the Third World. This is not to say there are no training or retraining requirements. To the contrary, these requirements are considerable and pervasive. But the education levels mean that workers should be capable of accepting this retraining and be able to learn the skills which new technologies and methods require. In the short run, however, there is a need to be concerned about the ability of the government to maintain the education system, even as it is being reformed to make it better and to eliminate the high ideological content which typified the old order. There is also a need to be concerned with finding the resources to provide the necessary retraining of existing workers. Again these are areas where Western assistance can play a significant role.

Finally, there is a need to develop a new/different capacity for policy formulation and implementation within government, which will require both institutional change and human resource development. Because the Baltics were not independent states, even nominally, they lacked many of the institutions, even of the Soviet variety, which independent states naturally possess. More fundamentally, as they move to embrace more of the elements of a capitalist economy, the type of institutional capacity required by government will change dramatically in scope and character. Both bureaucrats and politicians in the new system need to understand:

Policy formulation and implementation within government will require both institutional change and human resource development.

- the role of government and policy in the new order;

- where choices have to be made; and
- what alternatives are available.

The simple-minded view, found amongst some citizens, including some politicians and bureaucrats, is that socialism has failed and therefore, there is no longer any role for government. This is clearly a wrong view. Government's role has changed and in relative terms, lessened, but it has certainly not disappeared. There is an urgent need to enhance understanding of the requirements for effective policy-making and implementation, especially economic policy, in a market-based economy.

The Baltic Economic Management Training Program (Phase 1): Meeting the Needs of the Public Sector

The primary purpose of the program was to enhance the participants' understanding of the theory and practice of market economics and the conduct of public sector decision-making in a mixed economy.

The Baltic Economic Management Training Program (Phase 1) was a two month training program conducted in August and September 1992 by the Department of Economics of Dalhousie University. Funded by the Task Force on Central and Eastern Europe, External Affairs and International Trade Canada, Government of Canada, the program involved twenty-one government officials--seven from each of the Baltic republics of Estonia, Latvia and Lithuania. The primary purpose of the program was to enhance the participants' understanding of the theory and practice of market economics and the conduct of public sector decision-making in a mixed economy.

Training and education related activities are an area where Canada has strong capability and have been a focus of many of the programs supported by the Task Force throughout Eastern/Central Europe. At the same time, training is recognized within the Baltics as an important area of need. It makes sense, in these circumstances, for Canada to focus its technical assistance program to the Baltics in this direction.

Traditional development assistance packages aimed at real physical investment are not required. The private market, to a large extent, should provide for this. The development assistance community can play its most important role in moving the adjustment process forward by helping to meet the institutional and human resource requirements of adjustment while acting to lessen the negative impacts of adjustment in human terms.

Through 1992, the Baltic economies fared much worse than was expected at the beginning of the year. 1993 was also a year of continuing downturn. What this shows, amongst other things, is that the adjustment process is neither easy nor swift. It is essential that the resolve for change not falter on these accounts. It is equally essential that the international community be prepared to help to assure that this does not happen. The international community must be ready to support the efforts for change and the struggle to install democracy. Estonia, Latvia and Lithuania all need this help in their transformation. With help, they will succeed.

The international community must be ready to support the efforts for change and the struggle to install democracy. Estonia, Latvia and Lithuania all need this help in their transformation. With help, they will succeed.

The Dalhousie program was also one which Canada/Dalhousie could deliver in a way which was perceived as non-ideological. It is important for the Baltics, at the present time, that ideology not be allowed to dictate policy direction. This is, after all, what they are trying to escape from.

Finally, a Canadian involvement offered the advantage of a North American perspective for an audience which worries about being overly influenced by Western European models without adequate opportunity to look at alternatives. This is especially relevant in the field of economic policy and was a major reason for the practical attachment phase of the program which depended, for its success, on the support of government, the private sector and the community.

Postscript

In February 1994, the Baltic Economic Management Training Program (Phase II) officially began. Three years of committed funding has been provided by the Bureau of Assistance for Central and Eastern Europe, Foreign Affairs and International Trade Canada, in cooperation with Dalhousie University and the Governments of Estonia, Latvia and Lithuania. A further three years of funding to follow has been accepted by all parties in principle.

Under the Phase II Program, more of the program delivery will take place in the countries themselves, providing for local institutional development in the process.

Despite the fact that the adjustment process is far from over, the Baltics are showing very real signs of progress in certain areas. The Program hopes to contribute further to this progress over the next several years. It will be vitally important for Canada, as for other Western countries, to maintain its support as the reform process proceeds. To withdraw prematurely would be a major mistake. Programs like this will continue to be needed for some time.

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PART IV

BUSINESS AND DEVELOPMENT

Introduction

by Roy George

One of the main obstacles to economic development in the Third World is an inadequate supply of management skills. Sometimes this is a result of management of enterprises having been firmly in the hands of expatriates from colonial powers who migrated when independence was declared, leaving a void that nationals did not have the training to fill; or it may simply be that enterprises are of such recent origin that there have been few opportunities for nationals to learn the trade. Helping to improve the supply of management skills is therefore one of the most important contributions universities in developed countries can make to the cause of international economic development.

Such help normally flows from business schools since it is there that universities' faculty resources in production, finance, accounting, marketing and management -- those areas of prime importance to management --- are concentrated. Canadian business schools have been active in making their resources available to countries in the Third World. The Dalhousie School of Business Administration has managed projects in which it has been linked with universities in China and Zimbabwe. In these countries, its faculty have supplemented the local resources, have trained potential faculty, have exposed existing faculty to North American management practices, have undertaken research into local industry and encouraged local faculty to do the same, and have arranged for the installation of computers and other equipment, training local faculty in its use. Details of the School's activities in China appear in the first article in this section. In addition, faculty of the School have taken part in overseas development projects, managed by other departments of the University, in Ghana and Nepal.

There is little doubt that their contributions have been considerable. Hundreds of business students in countries of the Third World have had higher quality education than they would otherwise have had, and have been given the basic tools which they need to develop into the managers their countries so badly need, and their universities have been helped to develop viable business schools capable of carrying on without outside support.

Like Portia's mercy, these activities have benefited those who have given as well as those who have taken. Faculty of Dalhousie's Business School have had their horizons expanded, good students have been attracted to Dalhousie who could not otherwise have come, and Dalhousie students' education has been enriched by their interaction with students from the Third World.

The other main international activities of the Dalhousie School of Business Administration have had a rather different focus. Their principal aim has been to expose its students to the realities of foreign trade and investment and, by conferences, courses, workshops, publications, overseas visits, and service on government committees, to help Canadian business, particularly Nova Scotian business, to compete successfully in the international market place. All this has been pioneered or coordinated by the School's Centre for International Business Studies, which has achieved much more than might have been expected, given its limited resources. The second article in this section gives a more detailed account of its activities.

THE TRANSFER OF MANAGEMENT EDUCATION AND TECHNOLOGY TO CHINA

by Cecil R. Dipchand

Canada-China Management Education Program (CCMED) Outline

CCMEP is a network of forty-eight Chinese and Canadian universities created, with financial support by CIDA, to help meet a growing demand for produce management educators in China. Phase I began in 1983 and involved eight leading Chinese and ten Canadian universities. Under Phase II, which began in 1987, these original partnerships were expanded to include two dozen Canadian and two dozen Chinese universities.

The Dalhousie/Xiamen University Linkage Project started in 1983 and currently runs until June, 1994. In 1983, Xiamen University was one of the original eight Chinese universities (under the supervision of the State Education Commission, SEdC) to establish linkages with Canadian universities under a CIDA/SEdC cooperative institutional linkage program. Xiamen University (with its Economics College) was linked with Dalhousie University (with its School of Business Administration).

The objective of this paper is to summarize the experience of the Dalhousie/Xiamen University Management Education Project from its inception to the current time. While this project is part of a network, its activities are relatively independent and separable from those of the other linkages.

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Project Identification

Economic reform since late 1978, has changed China in significant ways and the Chinese education system is being updated as part of the economic reform process. Several factors have combined to influence the changing nature of management education in China. The centrally planned-economy model is shifting to a socialist market economy model, where competitive forces are influencing the behavior patterns of enterprise managers. There is need to upgrade the management skills of existing Chinese enterprises to levels of efficiency required in a competitive market. Also, there is need to train more people to meet

the managerial resource requirements of an expanding Chinese economy.

Administration, management, curriculum development, educational programs and teaching technologies in foreign universities are viewed as potential models in the reform of China's education system.

China is interacting with Foreigners on an increasing scale and international business practices are being used increasingly by Chinese enterprises and academics. There is need to facilitate the orderly transfer of relevant management technology from foreign countries to China. Exchanges and cooperation between Chinese and foreign universities have grown significantly. Administration, management, curriculum development, educational programs and teaching technologies in foreign universities are viewed as potential models in the reform of China's education system. Chinese educational institutions need assistance in applying relevant foreign education models.

Consultations were held with top level Chinese and Canadian government officials and these resulted in an exchange of visits among Chinese and Canadian universities' representatives, enabling them to have the opportunity to identify and assess, in a general manner, the strengths and weaknesses of Xiamen University and its Economics College. The Xiamen representatives outlined the short and long term goals which they hoped to achieve through an association with Dalhousie University. The role of the Dalhousie representatives was mainly to identify the strategies or activities which should be taken to achieve those goals, within budget constraints defined by CIDA. It was quite clear to both parties that funding for Phase I would be for a maximum of five years with no guarantee of renewal. However, this was not viewed as an impediment in the planning process. The longer term goals of Xiamen University spanned 10 to 15 years and the discussions always took account of this timing dimension.

The period 1983-87 was essentially developmental.

The period 1983-87 was essentially developmental, whereby faculty and non-faculty resources were procured with a view to the establishment of an MBA degree program. Achievements during this period include the following:

1. Twenty-five Xiamen teaching assistants completed Master's Degrees (MBA, MDE) at Dalhousie University and St. Mary's University, Halifax, Canada. Of these, 76% return to teaching positions at the Economics College and now serve as the nucleus of the management faculty for an MBA program.
2. Eight Canadian professors taught nine summer courses (lasting 6 weeks each) over the 1984-86 period. These courses stressed modern management techniques in selected business disciplines and the international dimensions of business. All courses were conducted at the Economics College — for credit to qualified students, for audit by students and professors from several Chinese universities, and for audit by managers from enterprises in Xiamen.

3. Four professors from the Economics College visited Canada for study tours of 3 months duration. These visitors upgraded knowledge and skills in management education in the fields of international finance, international trade, international accounting and university administration.
4. Non-faculty resources (i.e. library books and selected educational equipment) were supplied from Canada to the Economics College to upgrade resources for teaching and research purposes.
5. An Economic Information Centre was prepared for. (It was finally established in early 1990 with 20 work stations, 10 printers, spare parts and software programs. A computer training session was held in Xiamen, in November 1990, for operators and supervisors of the Economic Information Centre. A follow up training session was held in September 1992, under Phase II.)

The relative success of Phase I of the Dalhousie/Xiamen University Management Education Program was recognized in a CIDA evaluation in 1985 (the OISE Report) and at a Canada/China Management Education Conference (April, 1986) in Shanghai.

Phase II: The MBA Center

The considerable success with Phase I of the CCMEP prompted Dalhousie and Xiamen University officials to initiate discussions in December, 1986, with a view to plan for Phase II. These discussions in China and Canada established the general objectives and program guidelines for Phase II, with the focus being on the MBA Centre which was set up in April, 1987. Organizationally, the MBA Centre is an umbrella or service unit within the Economics College and is responsible for the initiation, implementation, supervision and control of management related programs and activities in the various departments in the Economics College.

The considerable success with Phase I prompted Dalhousie and Xiamen University officials to initiate discussions in December, 1986, with a view to plan for Phase II.

Objectives of the MBA Centre

The general goal of the MBA Centre is to develop management and training capabilities to contribute to the economic and social development of China.

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The specific objectives are:

- a. to assist in curriculum and program development for an MBA degree program;
- b. to increase Chinese faculty resources better to handle management education needs in China;

- c. to promote institutional development which will facilitate the successful implementation of programs in management education at the Economics College;
- d. to promote research activities involving foreign and Chinese personnel;
- e. to enhance non-faculty (e.g. library and teaching aids) resources in support of program development in management education;
- f. to enhance management skills in Chinese enterprises.

Education Programs in the MBA Centre

One important criterion in curriculum development is that program content must be China-oriented to equip graduates with skills which are relevant for the Chinese environment.

Several educational/training programs have been developed and implemented to achieve the various objectives of the MBA Centre. One important criterion in curriculum development is that program content must be China-oriented to equip graduates with skills which are relevant for the Chinese environment. A summary of the various programs offered by the MBA Centre is presented in the following discussion.

The MBA Program The Master of Business Administration degree program is the dominant program of the MBA Centre and started in September, 1987. The essential features of the MBA program are as follows:

- a. The period of full time study is three years. (The first cycle of 30 students admitted in 1987 graduated in July, 1990. Twenty-nine students were admitted in 1987: 21 from various departments in the Economics College and 8 from Wuhan and Shandong Universities. In September 1988, 32 students entered the program: 5 from Wuhan and Shandong Universities and 27 from across China. About 21 students entered the MBA program in September, 1989 and 15 in each of the following two years. The decline in enrollment was due to budget cuts by SEdC.)
- b. Students are admitted to the MBA program based on their performance in unified exams set by SEdC.
- c. To graduate, a student must successfully complete twenty-two courses: 15 core courses, 4 courses in a specialized area of study and 3 electives.

- d. Most of the courses for the first three cycles of students (i.e. 1987, 1988 and 1989) were conducted in English. The MBA Centre places great emphasis on graduating MBAs for English-speaking jobs in China, especially for jobs in joint ventures.
- e. Most of the courses are taught by Chinese lecturers from the Economics College. The Chinese graduates from Canada and other countries play a key role in management education since they are able to adapt foreign business theory and practice to suit the Chinese environment. About 50 percent of the second and third year courses are taught by Canadian professors.

It appears reasonable to conclude that the MBA program is developing on a sound basis. The Academic and Degree Office Chinese State Council and some departments of SEdC have shown great interest for MBA programs in China. In 1991, the Chinese authorities permitted eight universities (including Xiamen University) to establish MBA degree programs. Of these eight universities, seven are linked with Canadian universities under CCMEP.

Training for Ph.D. Students The Economics College has a Ph.D. program and Phase II made some provision for the training of Ph.D. students in management education. Qualified students who completed the first year of the Ph.D. program at Xiamen would go to Canada for their second years of study. After the Canadian study, the students would return to Xiamen to complete the Ph.D. degree under Chinese supervision. Six Xiamen students benefited from this program but only one student returned home. At the request of the Chinese government, this component of the program was terminated and funds were reallocated to other activities.

Six Xiamen students benefited from this program but only one student returned home.

Management Training Programs The MBA Centre has three management training (or executive development) programs:

- a. There is a correspondence program which takes two years to complete. Students (i.e. managers, directors, etc.) do not have to quit their jobs but can "study at home".
- b. There is a young executive post-graduate program where several management areas are emphasized. The students include managers, factory directors and leaders from different levels of Chinese enterprises. Currently, there are 35 students who study full time or part time.
- c. Guest lecturers (Chinese and foreigners) are sent to larger enterprises to hold seminars on management topics which are of interest to the employees of those enterprises.

Developing Faculty and Administrative Resources

There is always pressure for more faculty and several further steps are being undertaken to ensure that the MBA Centre has a continuous pool of qualified people from which to select.

Resources are needed to run the MBA Centre. Currently, the returning MBA graduates from Canada and other countries undertake most of the teaching/lecture assignments to the various educational/training programs. In addition, foreign professors play an important role in teaching courses for which there are no qualified or available lecturers at the Economics College. Finally, the MBA Centre can draw upon the graduates of its own MBA program (after July, 1990) and from the Ph.D. graduates from the Economics College. However, there is always pressure for more faculty and several further steps are being undertaken to ensure that the MBA Centre has a continuous pool of qualified people from which to select.

Students for MBA Degrees in Canada. There are some deficiencies in faculty resources needed for teaching in the MBA program at the Economics College. Phase II of the CCMEP recognized this fact and provided for a number of Chinese student-teachers to be trained in Canada. The Dalhousie/Xiamen linkage agreement provided for four such positions. Unfortunately, this component of the program was terminated because of the non-returning problem noted above.

Upgrading Senior Faculty in Canada. The objective of this activity is to assist in the upgrading of management knowledge and skills of selected (senior) faculty members in the Economics College and Xiamen University. Under CCMEP, Phase II, senior faculty are involved in a training program of six months duration in Canada. These visiting scholars are selected from several areas of specialization: finance and banking, marketing, international business, applied statistics, management, accounting and auditing. Each visiting scholar is assigned to a Canadian faculty to provide opportunities for the study of curriculum development, teaching technologies, course administration and student/professor relationships. Also, there are to be opportunities for joint research. The program provides for 23 faculty members to benefit from this activity.

The Chinese administrators reviewed and observed the organization, curriculum, faculty and other resources involved in management education. They had opportunities to interview senior administrators in host Canadian universities and to review linkages among businesses, governments and universities.

Observing the Delivery System for Management Education in Canada. The objective of this activity is to assist senior administrators from the Economics College at Xiamen University and associated Chinese universities in policy and program development and institutional building for the delivery of management education. Under CCMEP, Phase II, 19 senior administrators (i.e. vice-presidents, deans, associate deans, etc.) visited Dalhousie University and its associates for two weeks. The Chinese administrators reviewed and observed the organization, curriculum, faculty and other resources involved in management education. They had opportunities to interview senior administrators in host Canadian universities and to review linkages among businesses, governments and universities.

Developing/Procuring Non-Faculty Resources

Reading materials and equipment (e.g. xeroxing, computers, telecommunication, etc.) are needed to support the educational/training programs of the MBA Centre:

Reading materials and equipment are needed to support the educational/training programs of the MBA Centre.

- Existing non-faculty resources flowed from many sources, including Dalhousie University under Phase I of the CCMEP. However, these proved inadequate to meet existing and expected needs;
- Under Phase II of the CCMEP, text books are being supplied from Canada for each of the 22 courses in the MBA program;
- The MBA Centre has organized a group of young to middle-aged scholars to translate and publish a first series of MBA textbooks in Chinese under the guidance of a Ph.D. supervisors' consultant group. Contractual arrangements have been made with a Chinese publishing house;
- Negotiations are underway to have more micro-computers under Phase II of the CCMEP or from World Bank funding.

Classification of International Programs

Ian McAllister, in a conference paper at Western University, (1992) highlighted six evaluative classifications for international programs and the following is a summary of how the Dalhousie/Xiamen University Linkage Project measures up to these classifications:

Research and Publications. Appendix 1 is a listing of the articles and books which have been produced. The program provided funding for research and publication. Most of the publications involved Chinese scholars and are published in Mandarin for Chinese readers.

Research and Development. Almost all of the texts are "development" in the sense that they provide knowledge which was not readily accessible to students and managers. Books were destroyed during the Cultural Revolution and there is a desperation shortage of relevant and up-to-date teaching materials. The books published as part of this project fill a crucial gap.

Education and Training. This project is primarily involved with education and training in management.

This project has promoted an educational capacity which was non-existent in 1983.

Capacity Building. This project has promoted an educational capacity which was non-existent in 1983. The education and training capacity which has been developed has already provided useful outputs for managerial talent in China. MBA graduates have no difficulty in finding lucrative jobs in the industrial and commercial sectors of the Chinese economy.

Regional Concentrations and Networking. Dalhousie University is part of a network of Canadian universities which are involved in the transfer of management education and technology to China. At CIDA's request, Dalhousie University cooperates with sister institutions in the Maritimes. In China, Dalhousie University has a regional concentration with Xiamen University which in turn is linked with Wuhan University and Shandong University. For practical purposes, day to day management has always been between Dalhousie University and Xiamen University.

By agreement, project activities were to be shared among the Maritimes universities: 65% for Dalhousie University and 35% for the others. In practice, Dalhousie University received a much larger percentage of the activities. A similar situation occurred in China: there were weak linkages between Xiamen University and each of its other two linkage partners.

At least from the Chinese viewpoint, there is sustainable development.

Towards Sustainable Development. At least from the Chinese viewpoint, there is sustainable development. SEdC and Xiamen University are determined to expand management training in Xiamen and several events support this direction. SEdC has finally authorized nine Chinese universities (including Xiamen University) to offer an MBA degree and has promised to increase funding for increased enrollment. At Xiamen University, the MBA Centre has been elevated to a departmental status which qualifies it for independent funding and staffing. The Economics College has taken the initiative to reach out to the business community through its various executive development programs. Finally, faculty members in the Economics College are busily engaged in a truly capitalist academic activity — consulting!

From the author's vantage point, it is difficult to predict the state of sustainable development.

From the author's vantage point, it is difficult to predict the state of sustainable development, as it applies to this relationship. One would suspect that if, and when, CIDA's funding is terminated 'sustainable development' would grind to a screeching halt.

Lessons to be Learnt

A number of 'lessons' might be extracted from this project. They include:

- The development of an institutional linkage takes time: it must be recognized to be a long term process. Long term goals should be established and then, within that framework, short term goals should be established. Because of this process, longer term perspective objectives, goals, strategies, etc. should be flexible, should be monitored efficiently and should be adjusted when needed. But the 'long view' should always be in place.
- The recipients of aid must be actively involved in project identification, project planning, project implementation and project management. The Chinese government (through SEDC) and Xiamen University (through its Economics College) are involved in all of the above activities. That has proven essential.
- The linkage partners must have mutual respect for each other and must cooperate for the benefit of both institutions. Benefits that accrue solely to one institution will not be enough for a successful partnership. The Project Director at each institution must have relative freedom to make decisions within project guidelines; interference by 'higher' levels of authority is detrimental.
- Social and cultural norms in the foreign country must be carefully understood and respected. Personnel for assignment in the foreign country must be selected with this principle in mind.
- It is obviously difficult for a small program, such as CCMEP, to tackle imbalances or structural weaknesses in the education system of China. Project activities have to take place in an environment which may not be totally suitable for project orientation and implementation and the following discussion highlights some of the structural features which may have limited the scope of technology transfer.

The development of an institutional linkage takes time: it is a long term process.

Social and cultural norms in the foreign country must be carefully understood and be respected.

Some Factors Limiting Management Technology Transfer

Traditionally, management education in China was consistent with central planning and was significantly influenced by the Soviet Union. Certain features of the education system may not therefore be suitable for an MBA orientation:

Graduates and undergraduates from the typical Economics programs lack management training and knowledge and this limits their capacity in managerial roles.

- Business management is regarded as a component of Economics where theoretical and macro-oriented courses are greatly emphasized while application and micro-oriented courses are neglected. Graduates and undergraduates from the typical Economics programs lack management training and knowledge and this limits their capacity in managerial roles.
- Business management journals are classified as second-class journals and have lower acquisitions priority relative to the standard economics journals.
- Management education is classified into very different and narrow fields of study to train students for specific government institutions. In general, if the government establishes a new institution, there will be a new department or specialty to train staff for specific functions in that institution. If the government cancels an institution, the corresponding training program, department or specialty will also be canceled and this creates difficulties for universities.
- Since the training programs, departments or specialties are created to meet the needs of specific government institutions, there is a lack of inter-department communication within a given university. As a result, courses overlap or are duplicated among programs, departments or specialties and human and other resources are not used effectively.
- Since management programs are included in Economics, graduating students with management specialties are awarded degrees in Economics. Such a model lacks international comparison and has become a handicap for international academic exchanges.

China wants to concentrate on the establishment of its socialistic market economy.

The above (and other) problems remaining in Chinese management education are of great concern to the government, enterprises and universities since China wants to concentrate on the establishment of its socialistic market economy. It is recognized that under the socialistic market economy, management education systems in China need to be further reformed for several reasons. These include:

- There is a potential demand for management expertise by Chinese enterprises in the future. Therefore, application-oriented and micro-oriented courses should be a top priority in curriculum design for management education.

- Students graduating from universities will increasingly choose their jobs in a labor market and rely less on government placements. Thus, management education programs should be designed in a more general and flexible format to meet personnel demand under a growing and changing environment. In other words, let students decide what fields they should major in according to market demand and their personal interests. The traditional model, which fixes students in a specific department or major sector, forever should be abandoned.
- A lack of good faculty in management is a serious problem in Chinese universities. It is known that Chinese universities emphasized undergraduate training and actually did not implement a graduate degree system until 1982. From 1982 to 1985, 98% of Chinese faculty did not have a masters degree but currently, about 30% to 40% of Chinese faculty have masters degrees and about 5% have Ph.D. degrees. More seriously, many young faculty are leaving educational institutions for more lucrative opportunities outside the university.
- Obviously, problems are not limited only to graduate training but are found at all levels of management education in China. A recommendation has been made to establish business schools with BBA, MBA and DBA programs. If implemented, this proposal would make management education independent of economics education and concentrate on training potential managers for enterprises.

Students graduating from universities will increasingly choose their jobs in a labor market and rely less on government placements.

It is expected that future reforms will make Chinese management education consistent with its socialistic market economy, improve the quality of management education, increase a faculty's working efficiency, and promote academic exchange with advanced industrial countries. The current change in China calls for further reform in Chinese management education. The establishment of BBA, MBA, and DBA programs is consistent with the new environment in China and this suggestion has been greatly supported by many Chinese universities. A specific conference, organized by the SEdC, was held to discuss and evaluate the suggestion. Under such a condition, the CCMEP might emphasize the following:

The current change in China calls for further reform in Chinese management education.

- Assist through additional programs to bring Chinese management education to international standards;
- Cooperate with the Chinese authorities to help to establish management education programs with Chinese characteristics, considering the cultural and social environment in China.

To carry out these objectives, the CCMEP can adopt the following strategies:

To promote joint research, joint research teams can be organized to study Chinese and Canadian management problems of mutual interest.

- To promote joint research, joint research teams can be organized to study Chinese and Canadian management problems of mutual interest. These activities can be managed through a linkage project or a project like NSP established by the CCMEP. The results of these studies should be published and circulated to interested parties;
- In view of the gap in research methodology between Canadian and Chinese scholars, it is suggested that some research methodology seminars be conducted in China for Chinese faculty and Ph.D. students;
- Considering Chinese management education is weak in case methods, it is recommended to organize some case workshops to help Chinese professors to write their own casebooks and to integrate more case studies in their teaching;
- Help Chinese universities to establish/improve Ph.D. programs in management, including developing Ph.D. curriculum and offering Ph.D. courses. This should be the first priority of the CCMEP Phase III considering the lack of high quality faculty in Chinese universities;
- Establish a CCMEP Foundation to finance future Chinese management research and education. To maintain a long-term effect of the CCMEP on Chinese management education, a CCMEP Foundation can be established in each Canadian-Chinese university linkage to sponsor future joint research teams by returning Chinese students and visiting scholars under the CCMEP.

Conclusions

The Dalhousie/Xiamen Management Education Program has been quite successful in transferring management education and technology features to China in the last ten years. This paper is a review of the approaches and activities which have been undertaken to achieve this objective. This project, as a model, appears to have much to offer in further endeavors in China and other countries. However, there is still much more to do in China, especially since the country is now moving to a socialist market economy. Furthermore, some structural rigidities in the Chinese educational system need to be addressed. Considering all factors, it is necessary to argue that the two universities are ready for a Phase III under CCMEP.

APPENDIX 1

Publications under the Dalhousie/Xiamen University Linkage Program.

A. List of Articles (Published and in-progress)

Bowles, Paul and White, Gordon. "China's New Financial Assets: A Study of Capital Markets in "Market Socialism". Presented at Canadian Economics Association Conference, Victoria, B.C., June 1-4, 1990.

Bowles, Paul and White, Gordon. "The Dilemmas of Market Socialism: Part I - Bonds". **Journal of Development Studies**, April, 1992.

Bowles, Paul and White, Gordon. "The Dilemmas of Market Socialism: Part II - Shares". **Journal of Development Studies**, July, 1992.

Carroll, R., "The New Management Accounting", Journal of Accounting and Finance, P.R. of China, June 1991.

Carroll, R., Wei M., Liu F., "Comparative Accounting Culture: The Basis for International Accounting Research", The Theory and Practice of Finance and Economics, 45, No. 6, 1990.

Dipchand, Cecil R., Ge Jiasu and Liu Ping (1990): The MBA Centre at Xiamen University, Proceedings, Canada-China International Management Conference, Xi'ian, China, August 10-14, 1990.

Dipchand, Cecil R., Dodds, J. Colin; McGraw, Patricia and Keng Chen (1991): Emerging Trends in China's Financial Sector. Asia Pacific Journal of Management, Vol. 8, No. 1, April 1991.

Dipchand, Cecil R., "Deregulation in the Canadian Financial System." Paper presented at the Macro-Policy and Macro-Control International Conference, Xiamen, China (May 1989) and published in Foreign Economics and Management, Shanghai University of Finance and Economics, 1989.

Dipchand, Cecil R., "Regional Comprehensive Banks: Financing Economic Development", Proceedings, Global Conferences: International Marketing Technology and Innovation, ISITS, Shanghai, October 29-31, 1991.

Dipchand, Cecil R., "The Re-emergence of Comprehensive Banks in China", submitted for publication, October 1991.

- Dipchand, Cecil R., "The Ownership Structure of Chinese Banks", submitted for publication, November 1991.
- Dipchand, Cecil R., "China: Stock Market Activity - 1980s and Early 1990s". Working Paper, November, 1992.
- Ge, Jiasu and Lin Yan (1990): "Some Evidences of Accounting Internationalization in the People's Republic of China", Draft Paper, Xiamen University, P.R.C.
- Ge, Jiasu and Lin Yan (1990): "Tentative Plans Regarding the Formulation of Accounting Standards in China; Exposure Draft", Xiamen University, P.R.C.
- Ge, Jiasu, Ray Carroll, and Lin Yan, (1990): "The Development of Accounting Theory in the P.R.C.", Draft Paper, Xiamen University, P.R.C.
- Huang, Shizhong (1992). "Comparative Accounting & Auditing Between China and USA". **Proceedings**, NSP Conference, CCMEP, Xian, China.
- Huang, Liangwen (1992). "Sampling Problems in Agricultural Survey in China". **Proceedings**, NSP Conference, Xian, China.
- MacDonald, Joseph A. (1990): "Foreign Exchange Management in the Xiamen Special Economic Zone", Working Paper, Dalhousie University.
- Secord, Peter and Su Xijia (1990): "Classification of Accounting Policies: An Extension of the Framework", Working Paper.
- Secord, Peter and Su Xijia and Samuel Jopling (1990): "Inflation Accounting: Applications in the People's Republic of China", Presented at the XIII Annual Congress of the European Accounting Association, Budapest, Hungary, April 1990.
- Shi, Jing-Yun (1990): "Some Views about the Euro-currency Market", Draft Paper, Xiamen University, P.R.C.
- Su, Xijia (1990): "Cultural Effects on Accounting". Presented at the conference proceedings of the Global Economic Alliances: Implications for Accounting Education, Standard Setting and Practice, August 12-14, 1990, Concordia University, Montreal
- Wu, Shinong (1990). "Export Expansion and Economic Growth in China: An Empirical Study". **Proceedings**, 20th ASB Conference, PEI, Canada.

Wu, Singong (1992), Economic Indicators and Model for Stabilizing Economic Growth in China: An empirical Analysis Proceedings, NSP Conference, Xian, China.

B. List of Books Published

Five textbooks for use on the MBA level were published in China in 1990-92: Wu, Shinong, Statistics, China Foreign Economic Relations and Trade Publishing House, Beijing, 1990.

Liu Ping, Macroeconomics, China Foreign Economic Relations and Trade Publishing House, Beijing, 1990.

Chen Langlan, Corporate Finance, China Foreign Economic Relations and Trade Publishing House, Beijing, 1991.

Yi, Jianli and Wu Zhan, Consumer Behaviour, Jiang Xi Publishing, 1991. Zhang, Yichun; Dipchand, Cecil R.; Ma, Ming Jia, The Management of China's Financial System, Social Science Press, Beijing, 1992.

C. List of Books Accepted for Publication (forthcoming 1992/93)

Chen, Shouwen, Cost Accounting.

Chen Yawen, The Theory and Positivist Analysis of International Economic Relations.

Chen Yizhe, Price Survey.

Jiang Shaojin, Economics of Money and Banking

Li Bingjun, The Analysis of Some Concepts of Economics

Liu Xijung, The Theory and Practice of Land and Rent.

Wang Luolin, Assessment on the Social and Economic Impact of Foreign Direct Investment.

Wu Xuangong, The Reform of Chinese Property Structure.

D. List of Books in Preparation

Brown, Bill & Lin QingGuo, Organization Behaviors, November 1992.

Dipchand, Zhang, and Ma, The Management of China's Financial System, English Edition under preparation.

Gao Hong Zhen, Operation Research, September 1992

Huang ShiZhong & Chen, JianShen, International Accounting, August 1992.

Mao FuGen & Wong, YiFan, Managerial Accounting, June 1992.

Qian Zhemin, MIS, July 1992.

Wang MeiJin & Lin QinGuo, Marketing Research, October 1992.

Wu ShiNong, Statistics for Management, December 1992.

Wu Zhen and Yu Jainli, Consumer's Behaviors, Sichuan People's Publishing House.

Yu JianLi & Huang, WeiLiang, International Marketing, November 1992.

Zhuang Zongmin, International Business, December 1992.

In addition to the above, the faculty of Economics College, Wuhan University, will be preparing 4 books for publication. The titles are not available at this time.

APPENDIX 2

DALHOUSIE/XIAMEN UNIVERSITY LINKAGE PROGRAM
SUMMARY OF ACTIVITIES TO SEPTEMBER 30, 1991
BASED ON 1991 UPDATED BUDGET

Program Components	91-92 Outputs	Previous	Target	% Complete	Partner	Total Person Months
A. In-Canada Training						
In China Ph.D.	0	6	6	100	2	97
In-Can Visiting Scholars	9	3	23	52	4	72
In-Can Senior Scholars	4	19	13	200	7	1 3
B. In-China Training						
Can Profs to China MBA	2	9	11	100	5	46.5
Can Teaching Assist. Computer Training	0	5	5	100	2	25
	0	1	6	16.7	0	1
C. Joint Research						
Can Profs to China	3	2	6	83.3	2	10
D. Coordination/Evaluation						
Visiting Chinese	0	3	6	50		
Visiting Canadian	1	4	6	83.3	1	
Participation to CCC(CDN)	1	6	9	66.6		
E. Other Support Activities						
Books & Equipment (\$)	\$39,925	\$124,000	\$250,000	65.8		

11

THE CENTRE FOR INTERNATIONAL BUSINESS STUDIES AT DALHOUSIE UNIVERSITY

by Philip J. Rosson

Introduction

This chapter provides an overview of the Centre for International Business Studies (CIBS) at Dalhousie University. CIBS was established in 1975 to foster teaching and research in the field of international business in the School of Business Administration. Over the past 17 years, teaching and research has flourished, to the point that international business is now regarded as a distinctive strength of the School. The historical and organizational context of CIBS is described below, as are various program developments. Some initiatives have proven more successful than others. An attempt is made to explain the differing levels of success and so offer some "lessons" for the future. The chapter concludes with a brief discussion of developments planned or underway. With increasing emphasis being placed on international business in business school curricula across the country, continued innovation is required if Dalhousie's reputation is to be maintained in this area.

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History and Organization

Historical Context

The history of business education at Dalhousie University dates back to the 1920s when studies of Commerce began. Through the next fifty years, a growing number of undergraduate business courses were offered through a small Department of Commerce within the Faculty of Arts and Science. The 1960s and 1970s saw rapid growth for Dalhousie in general, and for business studies in particular. A Masters in Business Administration (MBA) program was started in 1967 and this set the stage for considerable change over the next few years. By 1975, a School of Business Administration (SBA) was established within a new Faculty of Administrative Studies. Faculty numbered 30 in 1975-76 and reached a high of 45 in the early 1980s, since which time budget cuts have resulted in a decline to 35. The SBA nevertheless remains the

largest School in the Faculty of Management (other Schools are Library and Information Studies, Public Administration, and Resource and Environmental Studies (SRES)). The four-year Commerce degree became a mandatory cooperative program in 1991-92 and currently has approximately 800 students, while the two-year MBA degree has some 300 students. The Faculty of Management has a Ph.D. proposal under review.

CIBS History and Organization

The CIBS program now operates through External Affairs and International Trade Canada (EAITC) with a mandate "to foster teaching and research in international business, and to provide outreach activities to enhance Canada's competitiveness in a global economy."

With the assistance of the federal Department of Industry, Trade and Commerce, CIBS was established within the SBA in 1975. Government's assessment was that relatively little international business teaching and research was taking place in the universities, and that this situation should change given the importance of international trade and investment to the Canadian economy. Accordingly, CIBS were established at four universities: Dalhousie University, Ecole des Hautes Etudes Commerciales (Montreal), the University of Western Ontario, and the University of British Columbia. The CIBS program has proven generally successful and, following two program evaluations, additional CIBS were set up at Manitoba (1983), Alberta and Saskatchewan (1987). A related Centre for Foreign Trade Policy and Law was established jointly between Carleton University and the University of Ottawa (1987). The CIBS program now operates through External Affairs and International Trade Canada (EAITC) with a mandate "to foster teaching and research in international business, and to provide outreach activities to enhance Canada's competitiveness in a global economy."

EAITC provides \$90,000 annually to each CIBS in support of its programs. At Dalhousie, about 50% of these funds are spent either directly or indirectly on students through, for example, fellowships, research assistantships, and the European Study Mission (see below). Dalhousie's contribution to programs in international business (faculty and staff salaries, space costs) are several times those of EAITC, but discretionary funds made available by the latter are invaluable to CIBS operations. In terms of organization, a sub-unit of the SBA, CIBS has an Executive Council which meets quarterly and to which the Director of CIBS reports. For a number of years CIBS had an Advisory Board made up of senior representatives of business and government. This Board was combined with the SBA Advisory Board about five years ago and the Director of CIBS provides reports to this group, as well as solicits its advice at semi-annual meetings.

Program Developments

Dalhousie's CIBS has passed through three stages of development in its programs, which largely coincided with the tenure of its Directors. From 1975–80, effort was primarily devoted to establishing the CIBS as an operational unit within the SBA, and developing the range of courses agreed to in the contract with the government. Dr. Donald Patton was Director during this crucial period when the foundation was laid for future CIBS activities. With the international business courses largely in place, considerably more emphasis was then placed on scholarly research during Dr. Alan Rugman's tenure from 1980–87. This served to enhance Dalhousie's reputation for international business in the academic and trade policy communities. Since 1987, an attempt has been made to revitalize the teaching program, to emphasize "relevant" research, and to develop regular outreach activities. CIBS has been under the direction of the author during this period. A general review of CIBS programs is provided below, with a number of recent initiatives highlighted.

An attempt has been made to revitalize the teaching program, to emphasize "relevant" research, and to develop regular outreach activities.

Teaching Program

In recognition of the effect of foreign trade and investment on the Canadian economy, all MBA students are now required to take the introductory "International Business" course. Beyond this requirement, international business electives attract considerable interest on the part of MBA students, about one third of whom now concentrate their studies in international business, either totally or in combination with another area such as finance or marketing.

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Course offerings are well developed at the MBA level, as indicated below. This is not the case at the undergraduate level where faculty cut backs have reduced offerings to those marked with an asterisk (*).

Core Courses

- International Business*
- Strategic Management of International Operations

Functional Courses

- Inter-cultural and Comparative Management
- International Marketing*
- International Financial Management*

Industry Courses

- International Banking
- International Transportation
- Seminar in Ocean Shipping
- Seminar in Ocean Resources and Industries
- Trade in Services

Special Interest Courses

- Managing Technological Innovation and Entrepreneurship
- Business and the Natural Env.: An International Perspective
- European Study Mission

An emphasis on transportation and oceans is natural, given that Halifax is a major seaport and that there is considerable ocean-related industry in the region.

The courses designated "core" and "functional" are found in the curricula of many business schools. Those included under "industry" and "special interest" are more distinctive, however, reflecting Dalhousie's geographic location and/or other particular interests. For example, an emphasis on transportation and oceans is natural, given that Halifax is a major seaport and that there is considerable ocean-related industry in the region.

Two recent innovative courses have been extremely well received by students. The "European Study Mission" supplements classroom learning, by placing selected students in business situations overseas. The course has been offered three times since its launch in the 1989-90 academic year. Ten students—in groups of two—are matched with five small Nova Scotian companies that are interested in exporting to Europe. Students work with their companies from January through April, familiarizing themselves with the company, its products, resources, and export objectives. During a three-week mission each May to the United Kingdom, France, Belgium, the Netherlands and Germany, students conduct the relevant market research on behalf of their company. As well as this research activity, the mission visits selected Canadian and other multinational corporations in various countries, to receive briefings on their strategies for competing in Europe and beyond. The group also visits Canadian Posts where briefings are given by senior trade commissioners. On their return from Europe, students complete written reports for their companies and give an oral presentation. The student enthusiasm for this learning experience is matched by that of the companies, who receive first-class research reports for minimal cost. This course is relatively expensive, costing approximately \$50,000 for 10 students and one faculty leader in 1991-92. Funding is provided through the Canada-Nova Scotia Cooperation Agreement on Industrial Development Opportunities, CIBS, and the companies involved. Students also pay a fee of \$500 to take the course.

The most recently introduced course is entitled "Business and the Natural Environment: An International Perspective".

The most recently introduced course is entitled "Business and the Natural Environment: An International Perspective" and recognizes the effects that industrial, agri-business and other human activities are having on the bio-physical environment. It was developed as a result of the interest of business school students and faculty, as well as the symbiotic presence in the Faculty of Management of the School of Resource and Environmental Studies (SRES). The course takes the perspective of senior management in large multinational corporations operating in environmentally sensitive industries, worldwide. These managers must make choices within a complex of different economies, markets, cultures, social systems, and regulatory regimes. Team-taught by professors from the SBA and SRES, the course makes extensive use of visiting speakers from a variety of organizations. One pedagogical method used is a negotiation exercise where teams of students must work out solutions to major environmental problems surrounding a

copper company operating in the Philippines. The exercise is videotaped for later analysis by course participants. This course is one of very few offered in Canada on this subject. The University of Western Ontario's business school offers a course on sustainable development but, to the best of our knowledge, Dalhousie's course has a larger and more diverse enrollment. Although designed primarily for business students, the class benefits greatly from the presence of students pursuing degrees in environmental studies, law, and other disciplines.

Other course developments are currently under discussion and will be described in the final section.

Research Program

A good level of research output has been achieved over the past decade with over 110 Dalhousie Discussion Papers in International Business published and distributed. Topics range from international marketing in the smaller company to ocean transportation, multinational corporations, technology management, and trade policy. Most of this research has been subsequently published in journal, book chapter, or proceedings paper form. A number of books and monographs have been published by CIBS faculty, with recent topics including export strategies, government export programs, and ocean transportation. Two books were researched and written under contract to EAITC. *Excellence in Exporting* (1985) and *The Export Edge* (1990) examined companies that had won the Canada Export Award with a view to understanding why they had enjoyed success, and identifying lessons they might offer to other companies.

"Relevant" research is emphasized by CIBS. The working definition employed here is that the study should be on a topic of interest to business practitioners and/or government officials, and provide results that are useful to these same people. Dissemination of research is also an objective in CIBS activities. This has been achieved through mailing list development and free distribution of papers to those expressing interest. The mailing list numbers some 850 persons who receive research listings, newsletters etc. on a regular basis.

CIBS has attempted to play a leadership role in international business research in the Maritime Provinces through networking with other university faculty in the region. An \$18,000 research fund was established with the assistance of the Council of Maritime Provinces and international business research ideas sought from faculty at universities other than Dalhousie. The Executive Council of CIBS adjudicated the research competition with resulting papers being published in the Discussion Papers series.

Most of this research has been subsequently published in journal, book chapter, or proceedings paper form.

CIBS has attempted to play a leadership role in international business research in the Maritime Provinces.

Outreach Program

Seminars are organized to capitalize on the opportunities presented by visits of important persons and groups to Dalhousie.

A variety of outreach activities has been undertaken by CIBS over the years. A number of large-scale conferences on subjects such as "trade and investment" and "ocean industries" took place in late 1970s and early 1980s. These conferences were aimed primarily at the business sector and good attendance levels were achieved. Over time, however, other organizations became more active in the conference and seminar field and this situation, as well as the substantial investment of time and money required to organize such events, led CIBS to concentrate on smaller and more targeted meetings. The "World Business Forum", for example, is a speaker series that brings about eight senior level business executives, government officials or academics to Dalhousie to discuss current international business topics. Off-campus attendees are invited to these sessions. Seminars are organized to capitalize on the opportunities presented by visits of important persons and groups to Dalhousie. Recent examples include seminars on Africa and on the ASEAN Region, hosted by CIBS in collaboration with other organizational units at Dalhousie.

For a number of years, Dalhousie's SBA has had international projects in the People's Republic of China and Zimbabwe. Both projects are funded by the Canadian International Development Agency and have essentially involved the transfer of management education at the MBA level. For historical reasons, neither project is managed by CIBS. The PRC project began in the early 1980s. At that time, CIBS had no interest in managing such a project, and a faculty member was therefore asked to coordinate the project. When responsibility for the Zimbabwe project passed to the SBA in the late 1980s, it was assigned to the same person.

The intention of this program was one of sharpening the export skills of Atlantic Region business owners and managers.

A five-module, ten-day training program on "Developing New Markets Through Exporting" was launched in 1989-90 and offered three times. The intention of this program was one of sharpening the export skills of Atlantic Region business owners and managers. CIBS was the initiator of the idea and was responsible for program design and delivery. The course was offered through the "World Trade Institute"—a collaboration between the Nova Scotia Department of Industry, Trade and Technology, the Halifax World Trade Centre, and CIBS. The program was well received by the 60 participants but, as a result of staff and policy changes at one of the collaborating organizations, has not been offered for the past two years.

The student-run "International Business Case Competition" has run for six years and pits teams from MBA programs against one another. By employing fax and tele-conferencing technology, student teams throughout North America are able to take part in the competition from their own home city. Students have a five-hour period to write an answer to an international business problem posed by a previously unused case study. The written answers are assessed by business and

government judges, who also quiz teams making the final round through interactive tele-conferencing technology.

In an attempt to enhance awareness and interest in the activities of CIBS, a newsletter was developed in 1989. Published twice a year, *From the Centre* is distributed to some 500 exporting companies in Nova Scotia, as well as to relevant government departments and trade associations. The newsletter also informs SBA students and faculty about CIBS activities.

In the summer of 1992, CIBS won a contract to design, develop and deliver a nine-day module on "Trade Promotion" for the Canadian Foreign Service Institute, the newly-created training arm of EAITC. This module is part of the training program that all new entrants to the trade stream of EAITC will undergo and was developed in conjunction with the CIBS at Ecole des Hautes Etudes Commerciales in Montreal. Teaching the new trade commissioners will further enhance the reputation of Dalhousie's CIBS at EAITC.

Key Lessons

Several conclusions can be drawn from CIBS' recent experience:

The quality of the teaching program is critical to success.

The reputation of a teaching program takes some time to become established. Once established, however, as long as the program continues to be nurtured, a good level of interest can be expected. Our experience is that students react very positively and quickly to the introduction of innovative courses. It appears that the "story" about appealing new courses such as "Business and the Natural Environment" spreads quickly among prospective students and is a factor for some in their application for admission to business school.

The reputation of a teaching program takes some time to become established.

Research and outreach activity is a more difficult "sell".

CIBS has had some good success in its research and outreach activities. By emphasizing applied research and putting effort into its dissemination, progress has been made. With a few exceptions, however, the pay-off from this investment is a longer-term one. The results of our outreach activities have been mixed, perhaps because there has been a tendency to treat them as a residual area of activity. Another difficulty with outreach is that it can encompass numerous activities for many different groups. One way of dealing with the heterogeneity of opportunities is to focus on one or a few activities. In practice, however, some flexibility is necessary in order to deal with the changing situation.

By emphasizing applied research and putting effort into its dissemination, progress has been made.

A five-year plan provides direction and focuses effort. The field of international business presents many opportunities. A small group such as the CIBS faculty, however, has a fairly limited capacity.

The field of international business presents many opportunities.

We have found that a simple five-year plan has enabled us not to become too distracted from the pursuit of agreed-upon objectives by unforeseen temptations. The same plan—if it emerges through discussion—also helps to engender commitment and *esprit de corps*.

Few groups are able to achieve their goals without the help of others.

Networking is essential but not easy. Few groups are able to achieve their goals without the help of others. This is increasingly the case in today's university. Resource deficiencies and pressures to reach out into the community mean that more university groups can only satisfy their objectives by working with outside organizations. CIBS collaborates with a variety of different organizations. This can be very positive. In some cases networking has brought in additional financial and other resources. In almost every instance, it results in a broader perspective for the faculty and/or students involved. However, networks can create difficulties. For example, as networks expand, communication and coordination problems grow. As well, the dynamic nature of networks means that a new situation or member may threaten rather than support another. CIBS has experienced both of these problems. On balance, however, collaboration has worked well.

The situation reflects the nature of the Nova Scotia economy, where government is the major force, and the fact that Canadian companies are not big supporters of education.

Government support is critical; private sector support is problematical. Government is very much a part of the CIBS net, whereas the private sector is less so. This may seem strange for a unit of a business school. The situation reflects the nature of the Nova Scotia economy, where government is *the* major force, and the fact that Canadian companies are not big supporters of education. Where collaboration can be expected to have a direct benefit for business, support is forthcoming. The European Study Mission is a good example. Activities that have a less obvious direct benefit are more of a problem. Fortunately, government has a longer-term perspective than business. EAITC is our prime source of support and encouragement. A close working relationship has been developed with EAITC and CIBS is very attentive to this key "client". As a result, numerous projects have been undertaken by CIBS for EAITC. The CIBS at other universities have done less well in this area. Relations with the provincial government are amicable but less intense.

This is paradoxical since, on the one hand, the university expects units to garner resources and demonstrate "relevance" through community involvement, yet, on the other hand, has a structure that impedes change, and financial guidelines that discourage the generation of outside funds.

The formal university organization can be a problem. A final conclusion concerns the university itself, which does not always help or reward outward-looking units. This is paradoxical since, on the one hand, the university expects units to garner resources and demonstrate "relevance" through community involvement, yet, on the other hand, has a structure that impedes change, and financial guidelines that discourage the generation of outside funds. This is a source of frustration to many units, including CIBS. Clearly this situation will have to change if universities are to work more closely with relevant communities, since interaction necessitates new ways of doing things and a certain flexibility on everybody's part.

Future Plans

Several initiatives are currently underway at CIBS. By the end of the 1992-93 academic year, it is hoped that two or three student exchange agreements will be in place. These will enable a small number of students to spend a term in a Commerce or MBA (or equivalent) program at a foreign university. This is an important element in the internationalization of our curriculum, students and the SBA. The foreign language proficiency of Dalhousie students has led us first to explore exchanges with universities in France and Mexico. Exchanges are also being sought in the U.S. and U.K.

The development of a small number of courses with an explicit geographic focus is also under discussion. Courses on Europe, the Americas, and Asia Pacific are envisaged. The challenge will be to develop and staff such new courses, when we are unable to offer all of the existing courses every year. It is hoped that outside funding will help with both development and staffing. Redeployment of existing faculty is another possibility, as is some modification of the existing course offerings.

No major changes are envisaged in the research and outreach activities of CIBS. It is a struggle to maintain existing operations, let alone expand these. A general strategy will be employed of collaborating with organizations that have similar interests and objectives. The partnerships will differ, depending on the activity in question. Whether the collaboration is with government, local companies, with non-SBA units at Dalhousie, or others, this is one way to achieve the same level of activity or, hopefully more, with fewer resources.

A final initiative of the SBA involves some reorganization. In future, the CIBS Executive Council will be the body to which the Director of International Projects as well as the Director of CIBS reports. The Executive Council will also play another role. The Faculty of Management's U.S. Policy Studies Group (USPSG) is represented on, but does not report to, the CIBS Executive Council. With a North American Free Trade Area looking more probable, this unit has broadened its contract research interests to embrace Mexico. As USPSG expands in this fashion, and as SBA activities become more international, there is a need for communication and coordination. For the moment, the CIBS Executive Council will be the forum for discussion.

Courses on Europe, the Americas, and Asia Pacific are envisaged.

A general strategy will be employed of collaborating with organizations that have similar interests and objectives.

PART V

**COMMUNITY DEVELOPMENT,
SOCIAL WORK AND EDUCATION**

Introduction

by Douglas Myers

The six pieces in this section reflect the marvellous diversity and richness that characterize the community development educational process. That work is complex, serendipitous, untidy, difficult, and, above all, wonderfully satisfying. Every one of the projects and experiences described here illuminates these qualities in fresh and unexpected ways.

These initiatives also demonstrate that this type of learning enterprise — whatever its particular purpose — involves a deeply reciprocal relationship. The participants and partners bring a range of interests, experience, values and aspirations to the relationship. These must be recognized and worked through. Expertise comes from many sources; in these contexts, "teachers" always learn and "learners" always teach.

I was particularly struck by three themes that seem to me to emerge strikingly from these accounts and assessments. The first is the absolute requirement for first-rate **project management**; the second is the need for **strategic planning and development**; and the third is the increasing power of the **local/global dynamic**.

However lofty the aspirations and objectives of those involved, community educational development of this sort is very tough work, full of nitty-gritty detail, unexpected problems and frustrating detours. Resources are always stretched and Murphy's Laws abound. In these circumstances, as anyone with project coordination responsibilities quickly discovers, good management is essential. Most of the time, these skills are developed under fire, but there is, I believe, more that can be done to provide "just-in-time" management skill development for such settings, than is presently available.

At the same time, Fred Wein's reflections upon the various models of community/university inter-relationship — as well as David William's comments on the value of a "thick" multi-initiative approach to such work — emphasize the need for long-term, strategic commitment.

It is fascinating that the best of such work absolutely depends upon individual passion and commitment (the examples in this collection are striking) and yet must, to be fully realized, go far beyond the personal. That combination — and the spin-offs it can generate — is perhaps best captured in Burris Devanney's account of the Gambia project. The strategic challenge, of course, is to foster and build the "thickness",

without losing the individual, human spark that always begins and enlivens the process.

Finally, the significance and relevance of local community development initiatives for international projects — and vice versa — comes through very clearly in this section. Certainly, as John Benoit shows in his account of our work with volunteer fire departments, that interconnectedness fits the experience of Henson College. Moreover, this seems to me to have some important implications for Dalhousie and post-secondary education in Nova Scotia.

Briefly put, it seems to me that the characteristics that are rapidly coming to reflect the contemporary **adult learning** and **human resource development** needs of Nova Scotia and Canada are very similar to the community development characteristics described in these articles. Ironically, universities have often found it easier to support such initiatives abroad than at home. Indeed, the nature of this type of community educational development work has always seemed marginal in a local setting, where it contrasts so sharply with the prevailing assumptions and models of university education.

Circumstances are forcing Canadian universities to reconsider those assumptions and models. Dalhousie's international experience in community educational development as well as its own half-century of local work through the Institute of Public Affairs and, more recently, Henson College, point to some highly promising possibilities. Those who founded the Antigonish Movement would not be surprised to find this **local/global dynamic** alive and well. They would, however, be heartened, by the examples presented here and their wider implications.

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THE UNIVERSITY AND THE DEVELOPMENT OF MI'KMAQ COMMUNITIES

by Fred Wien

Introduction

When it comes to questions of community and regional development, we have grown accustomed over the past several decades to looking at government policies and programs, in interaction sometimes with the private sector and the organizations of the targeted community, as being of decisive importance. This is particularly the case in the instance of the socio-economic and political development of Aboriginal communities because of the decisive role that the federal government and in particular the Department of Indian Affairs has had in controlling all facets of life on Indian reserves. We have written less, and know less about, the role that other institutions such as universities can play in the development process. The occasional commentaries that exist suggest, however, that the university's role can be considerable.

Universities themselves are inclined to highlight their role in the educational formation of a large portion of a regional population, and the implications of this for the socio-economic development of a region or a country. They may also point to their importance in economic terms for a host community or region — in terms of the economic stimulus provided not only by the purchasing of goods and services to feed the needs of the institution but also in terms of the impact of several thousand students on the local economy. More difficult to pin down are the spin-off effects that go beyond the purchasing power of the institution and its students to include such elements as the university as an incubator of ideas that are subsequently picked up and applied, the role of university graduates as new entrepreneurs, the role of the community service side of the University in building institutions and capacities in the community, and so forth. While not much has been written about the subject, some universities have been recognized for the developmental roles that they play; examples that come to mind include the University of Moncton in relation to the Acadian population of the Maritimes, and universities with strong engineering, science and technology programs such as the University of Waterloo and the Massachusetts Institute of Technology in relation to high technology spin-off businesses in their surrounding communities.

The university as an incubator of ideas... the role of university graduates as new entrepreneurs... the community service side of the University in building institutions and capacities in the community.

In this paper, I explore the relationship between the Mi'kmaq population of Nova Scotia and Dalhousie University over the past two decades. While there have been specific projects that have marked the relationship at particular times, and each of these could be described in some detail, I have chosen to provide an overview that includes a fairly large number of initiatives and connections. In this respect, this chapter will diverge somewhat from others in this collection where the emphasis may be on a specific project.

In the period between 1970 to 1992, there have been significant and often positive developments occurring within the Mi'kmaq community.

In the period between 1970 to 1992, there have been significant and often positive developments occurring within the Mi'kmaq community, despite the stubborn persistence of problems of poverty, alcoholism, suicides, family breakdowns and other indices of social well-being. While I will argue that the University has made a constructive contribution to many of these developments, I do not wish to imply that the University and its personnel are the key actors in the ongoing drama; rather, the principal initiatives have come from within the Mi'kmaq communities, and the University's role has been principally (and properly) responsive in nature. Neither can it be said that the University's role is beyond criticism, a point that will be illustrated from time to time in the following pages. Finally, I do not wish to imply that Dalhousie is the only University active in the field. On the contrary, the University College of Cape Breton has in recent years developed a strong Mi'kmaq Studies Program which has attracted large numbers of Mi'kmaq students, especially those from Cape Breton, to enrollment in post-secondary programs at the institution. Other Nova Scotia universities have also made specific contributions from time to time.

Historical Background and Contemporary Issues

This is not the place for a lengthy historical outline, but a few key points deserve to be noted in order to set the stage for the discussion that follows. There is documented evidence that Aboriginal peoples, perhaps direct ancestors of the contemporary Mi'kmaq, lived in the area that became Nova Scotia as early as 11,000 years ago. At the time of early and sporadic contact with Europeans in the early centuries of this millennium, the Mi'kmaq had developed a rich social and cultural life. They were governed by their own political institutions, both locally and in federations with related tribes, and their economic base consisted of seasonal hunting, fishing, trapping and gathering activities.

Contact with Europeans became more sustained in the 1500's, when visiting fishermen would set up seasonal encampments on the shores of the area. In the following decades, and particularly in the 1600's and early 1700's, the fur trade came to dominate the economic relationship. While the fur trade was disruptive of Mi'kmaq patterns, it was not devastating in its consequences because the Mi'kmaq were vital

participants in the trade, and had in any event considerable past experience with the hunting and trapping of fur-bearing animals. They were also important militarily in the ongoing struggles between French and English for control of the territory, a factor that was important in their signing a series of treaties of peace and friendship with representatives of the British Crown in the 1700's.

With the ascendancy of the British in the latter part of the 1700's, however, and with the decline of the fur trade, the Mi'kmaq became of reduced military and economic significance. The end of the French/British wars marked the beginning of a massive influx of settlers to Nova Scotia, from the United States in the period following the American Revolutionary War and the War of 1812, and from Europe as well. Settlers took over Mi'kmaq lands for agricultural purposes, and also settled at the mouths of rivers, with colonial governors and legislatures doing little to restrain these illegal incursions. In addition to loss of their ancestral lands, the Mi'kmaq also had their traditional economy completely disrupted. Impoverishment, starvation and population declines ensued, to the point that, by 1830, no more than about 1300 Mi'kmaq still survived in the Province from an estimated pre-contact population of some 20,000 people. The relegation of the Mi'kmaq to small, generally resource-poor reserves, marked the extent to which they had become dispossessed of their traditional lands and way of life.

The decades of the 1800's also marked the gradual imposition of an intrusive, colonial, and hierarchical relationship between the European and Aboriginal communities. While the Mi'kmaq were not defeated militarily, nor did they voluntarily give up their powers of self-government, nevertheless colonial governments (and after 1867, the federal government) increasingly took it upon themselves to dictate how the Mi'kmaq should govern their affairs and indeed what kinds of political organizations should speak on behalf of Aboriginal communities (i.e., an elected chief and council rather than more traditional leaders). The federal Indian Act of 1879, and its various successors, was particularly detailed and limiting in terms of the authority left to Aboriginal governments.

The federal Indian Act of 1879, and its various successors, was particularly detailed and limiting in terms of the authority left to Aboriginal governments.

Despite these measures, by the closing decades of the 1800's and into the 1900's, the Mi'kmaq were regaining at least a marginal foothold in the region's economy and their population began to expand again. While poor, Mi'kmaq families were able to survive through some combination of handicraft production, traditional hunting and fishing, wage labour on the fringes of the white economy (e.g., loading ships, cutting pit props for the mines, working on road building projects, etc.) and through migration to the eastern seaboard of the United States for both seasonal and more long-term wage or piece-work employment.

Two events in the first half of the twentieth century were to undermine these developments. First, the Depression of 1929-1936 seriously

affected the tenuous toe-hold of the Mi'kmaq on the fringes of the white economy; as the Mi'kmaq lost the opportunity for wage employment, the federal government began to respond to the emerging problems of poverty and underemployment with the provision of welfare payments to an ever-increasing proportion of the population.

Secondly, in the early 1940's, officials of the Department of Indian Affairs determined that, for reasons of administrative efficiency as well as for the provision of services and religious/moral teachings, it would be best if the 40 or so small Mi'kmaq reserves scattered throughout the Province could be centralized in two locations. Accordingly, residents of the smaller reserves were encouraged and in some cases forced to give up their subsistence way of life in their own communities in favour of relocating to Eskasoni in Cape Breton and Indian Brook on the Nova Scotia Mainland. While for a time the new and the original residents of these two communities were kept busy building houses for the expanding population, as well as health facilities, schools and churches (to be staffed almost entirely by non-Aboriginal personnel) the boom period soon ceased and very high levels of unemployment ensued. These conditions continue into the present day, with unemployment levels for the on-reserve population measured at half to two-thirds of the labour force in the 1970's and 1980's, and somewhat lower for the off-reserve population.

In the last two decades, the Mi'kmaq have strengthened their political organizations at both the band and the provincial levels.

In the last two decades, the Mi'kmaq have strengthened their political organizations at both the band and the provincial levels, with the formation of the Union of Nova Scotia Indians in 1969, the Native Council of Nova Scotia in 1975, and the Confederacy of Mainland Micmacs (splitting some of the smaller Mainland bands from the UNSI) in 1986. The Grand Council of the Mi'kmaq, a more traditional organization dedicated to preserving Mi'kmaq rights, ceremonies and spiritual beliefs, has also continued to strengthen its role. While the activities of each of these organizations has differed somewhat, depending on its constituency and mandate, nevertheless it is possible to summarize the main priorities of the Mi'kmaq as represented by these organizations as follows:

- (a) to obtain recognition of and respect for Mi'kmaq Aboriginal and treaty rights, including rights to land, to fishing and hunting, to commerce etc., whether by political negotiations or by court decisions
- (b) to regain authority over their own affairs, both in the form of self-government for representative or traditional political organizations, and through the development of appropriate organizations to regain control over matters such as education, policing and justice, health and family and child welfare
- (c) to rebuild a strong economic base for Mi'kmaq communities

- (d) to protect, preserve and develop the Mi'kmaq language, traditional spiritual belief systems, and other forms of cultural expression
- (e) to develop Mi'kmaq-controlled school systems and to make major improvements in the proportion of Mi'kmaq students graduating from high schools and from the Province's post-secondary institutions
- (f) to address the social problems affecting Mi'kmaq communities, such as alcoholism, suicides, unemployment and poverty.

In these two decades, the relationship between Dalhousie and the Mi'kmaq communities and organizations has touched on many, if not all, of these priorities. We turn now to a description and analysis of that relationship, under four headings: research and professional expertise, applied projects, special educational programming, and student access and support.

The relationship between Dalhousie and the Mi'kmaq communities and organizations has touched on many, if not all, of these priorities.

Research and Professional Expertise

Over the last two decades, University faculty and graduate students have engaged in a variety of research and scholarly activity pertaining to the Mi'kmaq in Nova Scotia. A small part of this work has been largely isolated from the Mi'kmaq community itself, in the sense that the faculty members have not themselves been engaged with the Mi'kmaq community. Their sources of information have been largely secondary in nature, for example archival records of historical demography or public documents on race relations.

A second category of research involves the Mi'kmaq community more directly, but the initiative for the research and the questions that are pursued stem from the personnel in the University. However, Mi'kmaq cooperation is required in order for interviews to be done or documents to be accessed, so at least the effort is made to explain the research and its possible benefits. In the process of gaining permission to proceed, some trade-offs may be negotiated -- for example, to ask some questions of interest to the Mi'kmaq organization involved, or to ensure that a copy of the completed research report is left with the community. Again, a few pieces of faculty research fit into this category, as well as several of the student theses completed in subjects such as history (on the 1940's centralization program) or in economics (on entrepreneurial development in a Mi'kmaq community).

A third type of research is largely responsive in nature, where individuals or organizations in the Mi'kmaq community take the initiative in seeking out a researcher and/or specifying the research topic and major questions to be addressed. A reserve may be interested in a study of shopping and buying patterns, for example, in order to establish whether there is an economic basis for setting up a general

store in the community. Or there may be an interest among several reserves in establishing their own police force and a Mi'kmaq controlled justice system, leading to a need for research to be carried out in pursuit of this objective. In the urban area, the Friendship Centre may be interested in achieving a better understanding of the needs of its constituency so that it can develop appropriate programs of service; thus graduate students may be approached to undertake thesis or project work to meet this need.

Perhaps the most significant research initiative undertaken in this period was that of the Marginal Work World Project located at the Institute of Public Affairs.

Perhaps the most significant research initiative undertaken in this period was that of the Marginal Work World Project located at the Institute of Public Affairs. This was a major interdisciplinary project funded by the Social Sciences and Humanities Research Council in the period between 1975 and 1981, and focused on the issue of low-income, marginal employment in the Maritime Provinces. It was recognized early in the life of the project that racial and ethnic minorities in the Region were likely to be over represented in the marginal employment sector, making it desirable for a portion of the larger research program to be focused on this issue. It quickly became apparent that the information base about the characteristics, causes and solutions to this problem was for the most part non-existent. With regard to the Mi'kmaq, for example, the available census data revealed very few people who were employed, and even for this group it classified fully 25 per cent of the employed as being "engaged in occupations that are unknown or not elsewhere classified". Thus the project undertook to document Mi'kmaq employment patterns in a systematic way. A Mi'kmaq research assistant was engaged, who went to each of the twelve band councils in turn to ask permission to undertake the research project on each of the reserves. This was granted without exception, although sometimes he would be asked to explain the project both in English and in the Mi'kmaq language. On the two largest reserves (Eskasoni and Indian Brook), the methodology called for a sampling approach to be used but the chief and council would not permit this approach. They insisted instead that each household be surveyed, rather than every third one according to a random sample, and no amount of arguing about the merits of scientific sampling would dissuade them from the belief that the researcher would invariably obtain a biased picture of employment and unemployment patterns on the reserve. As a result, each household was covered on all the reserves in the Province.

Once all the data was collected and analyzed, the researchers went back to a collective meeting of all the chiefs to present the results to them and to discuss how they might wish to use the data for their own purposes. At the time, this was an unusual step, and the chiefs' past experience with research was more along the lines of outsiders collecting information and not being heard from again, or having the results used against their interests (for example, by the Department of Indian Affairs to "prove" that their request for housing funds were excessive). In this instance, the chiefs reacted initially with some surprise (how did we let all this information get out) and with a

tendency to try to sit on the results rather than looking at them in terms of how they might be useful to them. A particular concern was the fact that the results (which included data on unemployment rates and rates of welfare dependency) could be reported for each community, thus raising the concern that an invidious ranking of communities would become public. It took almost two years for this concern to surface verbally, and as a result the publication reporting the results of the survey was held up until it became clear that results should not and need not be reported publicly on a community by community basis.

Individual bands and other Mi'kmaq organizations made some use of the results, for example in documenting the characteristics of their community for purposes of grant applications. Indeed, the research was of sufficient value that the Popular Education Program of the Union of Nova Scotia Indians requested that a follow-up study be done five years after the original data collection. This was done in 1981, yielding profiles of each of the reserves as well as a valuable picture of Mi'kmaq employment patterns changing between two points in time.

The impact of the research should not be exaggerated, however; long statistical reports are at odds with the more oral traditions of the Mi'kmaq, so it is unlikely that the resulting documents were widely read. In any event, there was no obvious impact on Mi'kmaq political leaders who continue to use statistics in a rather loose manner when it suits their political purposes (e.g., in routinely claiming unemployment rates of 90 per cent or higher). In retrospect, the personal relationships that developed through the research process between members of the Mi'kmaq community and University personnel, relationships that were to form the basis for collaboration in the future, were probably the more important outcome of the research enterprise.

In addition to collaboration in research, University expertise may also be called on to provide professional advice on topics of importance. While the range of subject matter may include everything from business management to medicine, the clearest example comes in the field of law. As mentioned previously, one of the highest priorities being pursued over the last several decades by the Mi'kmaq political leadership is to have their Aboriginal and treaty rights recognized and respected. The pursuit of these issues through the courts and through political negotiations requires considerable legal expertise, ranging from an in depth understanding of the developing concept of Aboriginal rights in Canadian and international law, knowledge of the terms and circumstances surrounding the signing of the treaties of peace and friendship, and a grasp of Canadian constitutional developments over several centuries. While several lawyers in Nova Scotia have specialized in this field over the past two decades, a faculty member at Dalhousie's Faculty of Law has made major contributions to research on these issues and to the pursuit of specific cases that have been argued successfully before courts at all levels of the Canadian judicial system.

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What has been largely absent in these research and related activities is the presence of Aboriginal scholars in university positions where they themselves could carry out the research that is required to be done. In contrast to U.C.C.B. where several Mi'kmaq faculty are appointed, this situation is changing only very slowly at Dalhousie. The Law School has had in recent years two faculty members of Aboriginal origin, both of whom have made major contributions to the pursuit of Aboriginal issues on the national level. Neither one is Mi'kmaq, however, and only one currently remains at Dalhousie. There are no full-time Mi'kmaq faculty appointed anywhere in the University.

Before leaving this section, it should be noted that University personnel are also sometimes called upon because they are perceived to be able to play a mediating role, or because they are seen as informed but neutral observers between contending parties. In the last round of constitutional discussions, for example, the Premier of the Province joined by the leaders of the opposition parties established a Constitutional Advisory Committee on Aboriginal Issues. Each of the major Aboriginal organizations was invited to send a representative, and two Dalhousie faculty members were asked to serve as Co-Chairs of the Committee. The discussions and the Report of the Committee clarified the nature of past differences on constitutional, treaty and self-government issues between the Province and the Mi'kmaq. They also contributed in a small way to the beginning of direct negotiations on these matters between the elected leadership of the Mi'kmaq and of the Province.

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in the legislature.*

Similarly, a Dalhousie faculty member was asked to advise the Provincial Electoral Boundaries Commission on how it might sound out the Mi'kmaq community on the desirability and feasibility of establishing a Mi'kmaq seat in the Nova Scotia House of Assembly. After consultation, it was agreed that a briefing session for members of the Commission should be organized, followed by a two-day conference that would bring together the elected Mi'kmaq leadership, and others, to discuss the idea. The conference was held in January of 1993 and the issues surrounding the establishment of a Mi'kmaq seat in the legislature were thoroughly debated. While agreement was not reached at the time on the particular model of a legislative seat to be recommended, the idea of having such special representation was widely supported. After the Commission reported its findings, the Nova Scotia House of Assembly approved the creation of a Mi'kmaq seat in the legislature, subject only to the achievement of agreement on the details of the seat to be established.

These examples illustrate that University personnel can sometimes play an educational and mediating role that can contribute to progress on important issues of public policy. It is a role that can, perhaps, be pursued more assertively in the future.

Joint Applied Projects

Apart from providing research and other forms of expertise, University personnel have also undertaken a number of joint projects with Mi'kmaq organizations. In the summer of 1981, the President of the Union of Nova Scotia Indians came to visit the Director of the Maritime School of Social Work to talk about, and develop a plan of action regarding, the serious social problems faced by many of the reserves in the Province. A series of meetings ensued, culminating in the decision to have the UNSI and the MSSW jointly convene a conference on social conditions and social services on Mi'kmaq reserves. With funding obtained from several sources, the three day conference took place at Liscombe Lodge in Nova Scotia in May of 1982. Some 60 Mi'kmaq from all parts of the Province and from all walks of life were invited to attend; the group included political leaders, elders from the community, Mi'kmaq youth, some band staff, and some who were unemployed. In addition, a small number of resource persons, both Aboriginal and non-Aboriginal, were also in attendance.

University personnel have undertaken a number of joint projects with Mi'kmaq organizations.

The conference dealt with serious concerns, and those attending spoke openly for the first time in many cases, and emotionally, about friends, relatives and community members who had been lost to alcoholism, to suicides, to adoptions into non-Indian homes, to poverty and to despair. While the group did not officially have any decision-making authority, nevertheless it brought together a cross-section of the community and included most if not all of the Mi'kmaq political leadership. Consensus was reached on at least three major points. First, the emerging movement to have the Mi'kmaq reassume control over their own child welfare matters was given a major push forward by the conference; it was agreed, in effect, that the formation of a Mi'kmaq Family and Children's Services agency was a matter of high priority. Secondly, it followed from the above that such an agency should be staffed by well-trained Mi'kmaq personnel, and that this would require the University's School of Social Work to establish a special and relevant degree program for the purpose. Finally, it was recognized that social problems on the reserves could not be effectively addressed in isolation from action on the economic front. Under conditions where up to two-thirds of the on-reserve labour force was unemployed and reliant on social assistance payments, it was unrealistic to expect that major progress could be made in tackling the social problems that provided the impetus for the Liscombe Lodge conference. Accordingly, it was agreed that steps would need to be taken to develop an employment and economic development strategy for the Mi'kmaq communities.

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In the months following the conference, the Maritime School of Social Work, in cooperation with existing and emerging Mi'kmaq social agencies, developed the design for and eventually implemented the Mi'kmaq Bachelor of Social Work Program. The early 1980's also witnessed the formation of the Mi'kmaq Family and Children's Services

Agency, which gradually assumed responsibility for all family and child welfare services for on-reserve persons in the Province.

On the employment and economic development front, Dalhousie and UNSI staff worked over the summer of 1982 to prepare a submission to the Donner Canadian Foundation. A proposal was submitted jointly by the Presidents of Dalhousie and the Union of Nova Scotia Indians, and was awarded a grant of \$125,000 in the early fall of the same year. Two Mi'kmaq staff were hired, and an advisory council called the Mi'kmaq Development Council was formed and co-chaired by the President of the UNSI and the Director of the MSSW. The Council included respected academics and business persons from the non-Indian community, as well as a number of chiefs and other community leaders from the Mi'kmaq side. Two years of meetings on reserves in different parts of the Province ensued, while the staff undertook research and consultation in all parts of the Province with a view to the development of an employment and economic development strategy.

The Ulnooweg Development Corporation was formed in 1984, with headquarters at Eskasoni, and with the chiefs of the bands plus representatives from the Native Council and the Native Women's Association comprising the Board of Directors.

When a draft document was prepared, the Mi'kmaq chiefs tended to ignore the off-reserve employment strategy that was suggested, but they did show considerable interest in the strategy for promoting on-reserve economic development. In particular, the Donner project recommended the formation of a Mi'kmaq controlled economic development agency that would provide capital and other forms of support to existing and new small businesses, whether these were owned by the bands or by individual entrepreneurs. As a result, the Ulnooweg Development Corporation was formed in 1984, with headquarters at Eskasoni, and with the chiefs of the bands plus representatives from the Native Council and the Native Women's Association comprising the Board of Directors. Under the leadership of the Board and UNSI staff, Ulnooweg attracted over \$4 million in capital from the federal Native Economic Development Program, and it continues to the present day to support small business development in Mi'kmaq communities.

The Liscombe Lodge Conference, therefore, played an important stimulating role in a number of areas. As a footnote to the discussion, by the end of the 1980's there had been sufficient changes in social conditions on the reserves, and sufficient interest in new and pressing issues, that a follow-up conference was planned. Held at Oak Island in the early summer of 1990 but following the Liscombe example in terms of participants and organization, Mi'kmaq persons from around the Province again debated the state of social conditions and services on reserves. New topics were addressed, such as the prevention of family violence and AIDS, and new resolutions about action to be taken were passed, some of which are now being implemented.

Over the latter part of the 1980's, the University, the Union of Nova Scotia Indians, and the Native Council of Nova Scotia also collaborated on what came to be called the Mi'kmaq Professional Careers Project. Working with seed money granted to the University from a private

estate and supplemented by grants from the federal government, a coordinator was hired to work within the University to improve access for Mi'kmaq students to academic programs leading to professional careers. The work of this project is implicated in a number of the educational developments referred to in the following two sections.

Special Educational Programming

It has only been in the last decade or so that there has been any significant improvement in the percentage of Mi'kmaq students who successfully complete high school, and the proportions who now do so are still well below the rate of non-Aboriginal students. Thus, while there are currently a good number of young Mi'kmaq students studying in and graduating from post-secondary institutions, there are also large numbers of persons in older age brackets who have not been able to access this level of education. The large majority of those who currently fill positions at the band level, whether as chief, band council member, band employee, or alcohol and drug worker have not had the opportunity for nor the preparation to undertake studies at the post-secondary level. At the same time, better levels of education and training are badly needed as these staff face increased responsibilities resulting from the transition of their communities to regaining powers of self-government.

The University has been asked to respond to this situation by providing a number of non-traditional programs aimed at meeting the educational needs of this group of potential students, a group characterized by being employed, by being mature in years and rich in work experience, but often not well prepared academically. As noted above, the Mi'kmaq BSW Program was one such initiative (1984-90), and this was followed by a two year certificate program directed to Community Health Representatives (1988-90). A Certificate Program for Mi'kmaq Alcohol and Drug workers is, at the time of writing, seeking Senate approval and is expected to be in operation between 1993 and 1995.

In each of these cases, the academic programs are planned by a joint committee that includes both University and Mi'kmaq community representatives. Committees with similar composition are also the key decision makers in the implementation of the program, making decisions in areas such as the approval of course outlines to make sure they reflect the desired, culturally relevant content, the selection of course instructors with emphasis on attracting qualified aboriginal teachers, and the recommendation of students for graduation. Since mature, working adults are involved, the programs are part-time and are offered on a decentralized basis (usually on reserve) with students coming together for several days of intensive study each month before returning to their home communities, their families and jobs. The certificate programs are likely to include a mix of courses, some geared to academic upgrading and personal development, others of immediate

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relevance to the work of the students, and still others that provide university credit so that the student is encouraged to undertake degree studies upon completion of the certificate program.

While the University has in the last analysis approved and supported each of these programs, they have not fit easily into the standard University mold.

While the University has in the last analysis approved and supported each of these programs, they have not fit easily into the standard University mold. University structures and administrative procedures are geared towards degree programs which are stable in character (e.g., admitting a group of students each year), respectful of a certain academic timetable, supervised by established committees and regulations that have developed over several years, funded by the established mechanism through the Maritime Provinces Higher Education Commission, taught by regularly appointed University faculty in University classrooms, and so forth.

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The special academic programs designed to meet the educational needs of mature, working, Mi'kmaq students, on the other hand, break all of these norms. They may only admit one class of students, they may well begin classes in a month other than September, they involve the community in special committees to supervise the program and develop academic regulations for its particular circumstances, they are typically funded by grants from several federal departments and (increasingly in the era of self-government) these grants may be channeled through an Aboriginal organization, classes may be taught by qualified sessional instructors many of whom are Aboriginal in origin, classes are typically held off-campus in the Mi'kmaq communities, and the Registrar may need to contend with non-credit as well as credit courses in terms of registration and transcripts.

This lack of fit creates frustrations on the part of both University personnel and those associated with the special programs. It is important to recognize, however, that these programs are necessary at this particular point in time. They are part of a response to a large educational need in the Mi'kmaq communities as they make the transition to self-government and as they come to grips with the legacy of mainstream educational institutions at all levels that have not served them well in the past.

Student Access and Support

At the present time, the number enrolled in Nova Scotia's universities is in the vicinity of 400 students, of which some 100 are enrolled at Dalhousie.

At the beginning of the 1970's, one could count the number of Mi'kmaq students attending universities on the fingers of one hand. At the present time, the number enrolled in Nova Scotia's universities is in the vicinity of 400 students, of which some 100 are enrolled at Dalhousie and a further 230 at the University College of Cape Breton. Many factors are responsible for the improvement, among them better rates of high school graduation, the return of more mature students to resume their studies, the takeover of the administration of post-

secondary programs by Mi'kmaq bands and tribal councils, and the improved levels and types of support services available to students.

At Dalhousie, the increased numbers of Mi'kmaq students are reflected both in regular admissions to standard university degree programs, as well as in special access programs in a number of fields. Since 1971, the Transition Year Program at Dalhousie has been admitting Black and Mi'kmaq students who have academic potential but who would not otherwise achieve academic acceptance. Such students are provided with a year of credit and non-credit courses in subjects such as Mathematics, English, and Black and Mi'kmaq studies, after which they go on to enroll in the regular degree programs of the University. Several professional schools have also established affirmative action programs (often including curriculum modifications and the provision of support services) in order to encourage the acceptance and graduation of Mi'kmaq and Black students. This has been the case at the Maritime School of Social Work since 1974, and more recently at the Faculty of Law, the Faculty of Medicine, and the School of Education. Usually these initiatives have worked fairly well, although these kinds of programs are inherently controversial within both the Aboriginal and the non-Aboriginal community. In addition, University personnel have tended to have these programs serve the Nova Scotia Black population as well as the Mi'kmaq, without always fully appreciating the differences between the two groups.

The University has also learned a great deal about the kinds of academic support services that are required not only to assist in the admission of students, but also to maintain a high level of retention of students through to their graduation. Of particular importance is the appointment of a Mi'kmaq education counselor whose role includes reaching out to the high schools where Mi'kmaq students are found, organizing orientations for incoming students, providing academic and some personal counseling to students, organizing workshops on study skills, library research or paper writing, and so forth. The availability of a resource center and meeting place for Mi'kmaq students is also very important.

While considerable progress has been made in achieving student access to regular degree programs, some important issues remain to be addressed. For example, virtually all Mi'kmaq students are concentrated in a narrow range of university programs, especially in the humanities and social sciences and a few in the professions that rely on these disciplines. Hardly any are found in mathematics or the natural and physical sciences, or in the professions that depend on a strong science base. This streaming is due in large measure to shortcomings in the high school education of Mi'kmaq students, who leave Grade 12 without a strong grounding in mathematics and the sciences. Thus in the short term, the University should consider undertaking a transition program for students admitted to the University to strengthen their backgrounds and prospects of admission into math, science and health

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science programs. Also, University personnel could perhaps make a contribution by working with Mi'kmaq educators and secondary school teachers to strengthen math and science education at the pre-university level. Such collaboration might extend to the organization of math and science-based summer camps for promising young Mi'kmaq students.

The University also needs to move further in having its staff better reflect the Mi'kmaq presence among the student body.

The University also needs to move much further in having its staff better reflect the Mi'kmaq presence among the student body. The number of Mi'kmaq employees in the University, which is one of the largest employers in the Province, is similar to student numbers a couple of decades ago -- less than half a dozen persons and no one appointed to a regular, tenure stream faculty position.

Curricula that include an awareness of cross-cultural differences and issues in race relations are also important for non-Aboriginal students to be exposed to.

The Mi'kmaq presence in the curriculum of university degree programs is also quite weak. This issue is important for two reasons. First, Mi'kmaq students need to have a curriculum that is relevant to their educational needs and reflective of their cultural background, both to enhance their motivation to study and to equip many of them for work related to their communities upon graduation. It is especially important to offer courses in the Mi'kmaq language for all the Aboriginal students studying in the metropolitan area. Secondly, curricula that include an awareness of cross-cultural differences and issues in race relations are also important for non-Aboriginal students to be exposed to. This is particularly important in the professional schools of the University whose graduates go on to work with clients from different cultural backgrounds --for example, the graduates of teacher education programs who will go on, in many cases, to become the teachers of Aboriginal students.

Conclusion

In this article, I have tried to summarize the various ways in which the research, teaching and administrative resources of the University have contributed to the process of Mi'kmaq socio-economic development over the past couple of decades. As might be expected, a major part of the University's role has been to provide, for the first time in its long history, post-secondary education to a large and growing number of Mi'kmaq students. This has been done not only in the regular degree programs of the University, but also in special transitional programs and in degree/ certificate courses of study established specifically to meet Mi'kmaq educational needs.

The University has also contributed to the development and strengthening of Mi'kmaq institutions, notably the Ulnooeweg Development Corporation, Mi'kmaq Family and Childrens' Services, and other social agencies.

Through this role, but also more directly through joint applied projects, the University has also contributed to the development and strengthening of Mi'kmaq institutions, notably the Ulnooeweg Development Corporation, Mi'kmaq Family and Childrens' Services, and other social agencies.

While a good deal has been accomplished, progress has to be measured against a University record that at best ignored the educational and research needs of the Mi'kmaq community for over a century, from the founding of the University in 1818 to the beginning of the 1970's. Progress must also be measured against the financial cost of the special educational and other programs that have been described in these pages -- costs which have almost invariably been met by direct external grants from federal departments rather than from the University's or the Province's educational and research dollars. In this connection, Mi'kmaq spokespersons point out that the province receives on an annual basis millions of dollars in the form of grants for equalization, health and post-secondary education. These amounts are calculated on the basis of the provincial population, a count that includes the Mi'kmaq, yet they have arguably seldom received the benefits that such funding provides for the rest of the Nova Scotia population.

Finally, the record of achievement must also be measured against what remains to be done fully to realize the objectives and priorities summarized at the end of Part II of this article. This raises the question whether the activities of the University in relation to the Mi'kmaq community have been optimal under the circumstances, or whether new directions and new approaches should be pursued. I have argued that, for the most part over the past two decades, University personnel have tried to respond constructively if not always perfectly to Mi'kmaq priorities. This approach is the correct one, much preferable to personnel in the University trying to determine unilaterally what is good for the development of Mi'kmaq communities and attempting to impose these priorities on them.

I have argued that, for the most part over the past two decades, University personnel have tried to respond constructively if not always perfectly to Mi'kmaq priorities.

A shortcoming of the responsive approach as it has manifested itself, however, is that it can be rather ad hoc and sporadic in nature, with initiatives coming and going, not necessarily coordinated with each other and not planned over the longer term. In view of the relationship that has developed between the University and the Mi'kmaq community over the last two decades, it may now be useful to think about a relationship that is more planned and forward looking in nature. This might begin with senior personnel from the University sitting down with the Mi'kmaq leadership to discuss the issues likely to face Mi'kmaq communities over the coming decade, and ways in which a strengthened partnership with the University might be helpful in addressing them. As the movement toward self-government continues, there will certainly be important but unresolved issues and unmet educational needs to which the University can surely contribute. The struggle to do so will continue to enrich the University and help it fulfill its mission in the region and beyond.

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THE NOVA SCOTIA - GAMBIA ASSOCIATION

by *Burriss Devanney*

Profile

This paper chronicles the history of an NGO, which began as a high school based, one-shot development education project and somehow kept moving and growing, through a series of interrelated projects, attracting along the way a small army of converts to development work.

While the earliest roots of this organization only go back to 1985 and the branches are not yet well developed, the trunk is becoming immense and the roots are spreading. It has the ungainly profile and endurance of a baobab tree. It seems certain to survive and keep growing for a long time.

In 1989, the Nova Scotia-Gambia Association (NSGA) was incorporated under the Societies Act of Nova Scotia with a fifteen member Board of Directors, "as a voluntary non-profit development education and assistance organization, dedicated to establishing linkages between Nova Scotia and The Gambia and creating opportunities for professional, educational and cultural exchanges for Nova Scotians and Gambians for mutual benefit." To date the Association has successfully conducted a series of 13 increasingly complex and ambitious projects. As one outcome almost 250 Canadians have been provided with an intense, first-hand experience of life in one of the smallest countries in the developing world, and more than 30 Gambians have had the opportunity to study or be trained briefly in Canada. The Association has established ongoing linkages between a number of individuals, groups and institutions in the two countries, and has begun to network these into a remarkably complex web of interlaced relationships. Dalhousie University's involvement in this network has included a teacher training project in The Gambia (not detailed here) and participation of The School of Education in a summer school skill development program for secondary school students in The Gambia.

To date the Nova Scotia — Gambia Association, as it was named, has successfully conducted a series of ten increasingly complex and ambitious projects.

The Association has been thus far recession proof, operating from project to project, with or without CIDA or other grants, always with a fallback position, always on a shoe-string and with volunteer labour. Nevertheless (not counting the 'Dalhousie project'), it has attracted more

than \$400,000 in matching grants from national funding organizations, has raised more than \$500,000 through a host of fund raising activities and participants' contributions, and has had the benefit of perhaps a million dollars worth of in-kind contributions.

Currently six diverse projects in the education and health sectors are either well underway or in detailed planning stages. They will directly involve close to one hundred Canadians and several hundred Gambians. By 1994 the Association hopes to open a Field Office in The Gambia and begin placing Canadians in the field on one-year contracts to work as partners with Gambians, in a variety of strategic development projects in education and health related work.

A Delegation Visits the Gambia

In 1980 a small delegation of Nova Scotians traveled to The Gambia to explore the possibility of linkages with two fledgling Gambian institutions: Gambia College, in conjunction with its expansion to new facilities in Brikama, was seeking to augment its programs in teacher training and agriculture with the assistance of counterpart institutions in Canada; the Gambia Technical Training Institute was still in the conceptual stage but was in the market for Canadian partners.

They did not foresee that they would be the first link in a complex network of linkages that would be forged between individuals, groups, institutions and communities both in Nova Scotia and The Gambia.

The Nova Scotians were novices to international development and scarcely knew what to make of this minuscule country, with its rustic capital city and mud-hut villages, its 500 kilometres of paved roads, its almost total lack of industrial infrastructure. How could they have known that they would be the vanguard of a small stream of Nova Scotians, who over the next dozen years or so would journey here on a series of projects and development education pilgrimages! Certainly they did not foresee that they would be the first link in a complex network of linkages that would be forged between individuals, groups, institutions and communities in Nova Scotia and The Gambia.

Brian Tennyson and George Brown of the College of Cape Breton, Dale Ells of the Nova Scotia Agricultural College and Margaret Swan, Vice Principal of the Nova Scotia Teachers College, were not overwhelmed by the prospects. George Brown, for example, describes his first visit to the old Vocational Training Centre in Banjul: "In the carpentry class, the instructor and a few students were working with a single piece of plywood, pretending for the visitors that something was really going on. In the automotive shop someone was repairing his own car. Not much else seemed to be happening." The need for a proper technical institute to train and develop trades persons and technicians was obvious. Its chance of success seemed less than propitious.

The University College of Cape Breton (UCCB) was the first Nova Scotian institution to take up the challenge of working in The Gambia, and this is where my own connection with The Gambia begins. In cooperation with the Association of Canadian Community Colleges and the Canadian International Development Agency, the UCCB undertook to assist in the establishment of the Gambia Technical Training Institute (GTI). That institute was to be built (and partially equipped) by means of a long-term, low-interest loan to the Gambian government by the World Bank. It was an ambitious but vital project in a country which, at the time, had an adult literacy level of perhaps 15 percent and but 39 percent of its school age children actually attending school — a country of 700,000 people with no university and but seven high schools; a country of massive unemployment in which 90 percent of the workforce was on the government payroll.

It was an ambitious but vital project in a country which, at the time, had an adult literacy level of perhaps 15 percent and but 39 percent of its school age children actually attending school.

The GTI was to be the key element of a national manpower development scheme embracing all of the technical training programs and vocational schools in the country. The institute's mandate was not limited to full time students: it was to provide day-release and extension programs in technical teacher-training and secretarial, technical and craft programs. The GTI was therefore called on to develop a liaison with government departments, parastatals, and private enterprise to determine the training needs of the country, and how best to respond to them.

I tied the first tentative loop in my association with The Gambia in November 1981, when I responded to a job advertisement placed by the UCCB in the Halifax Chronicle-Herald, seeking teachers and administrators to work at the GTI. Although I had worked in the 1960s in Rhodesia and Nigeria, I knew almost nothing about The Gambia. But I telephoned Brian Tennyson at the UCCB right away and that evening, on a strange impulse, went looking in the Halifax Shopping Centre for information on The Gambia — and found, at the entrance to Coles Bookstore, a bin full of books on sale at 99 cents entitled "The Gambia." It was a comprehensive 300 page coffee-table book published in 1977 on the history and culture of the Gambia, with hundreds of colour photos. I bought three copies, but never have I been able to find another copy of it anywhere, not even in the national library of The Gambia. Stumbling on this book at that time, in the throes its last sale prior to being trashed and going out of print, seemed to me even then an auspicious start to what has since become a long-term personal commitment.

From the second storey office I occupied on my arrival in Banjul in July 1982, I looked out upon open sewers, pot-holed streets, rusting corrugated metal roofs held down by masonry blocks and old tires, tailors and shop-keepers in one-room barn door lock-ups, cars double parked everywhere, goats and chickens in the streets, and streams of people flowing in every direction — to be sure, dignified market women and government secretaries in colorful wrappers, and self-

Pot-holed streets, rusting corrugated metal roofs... goats and chickens in the streets.

Dignified market women and government secretaries in colorful wrappers.

possessed Muslim men, ramrod straight in their long robes, but also poor people, peddlers, beggars, cripples scurrying about in wheelchairs, and children, children everywhere. So what was the attraction which kept me there and kept pulling me back time after time? Was it that, despite the hustle, this was a quaint old city, gentle and replete with small surprises? Was it that pleasant helpful people seemed to be there whenever you needed them? Was it the sense that I could be useful in this small country, where a bit of help and a modest degree of knowledge or skill would go a long way?

My work at the GTTI included being Department Head of Arts and Commerce, Acting Registrar, Coordinator of the five-member team of Canadian department heads, and general assistant to the Director of the institute. It kept me busy six days a week for two years. My wife, Louanne, accepted a job teaching at the Girls Presentation School in Banjul, a secretarial training institution run by Sister Muriel Savard, a Roman Catholic nun from Saskatchewan. My two children, Sara and Matthew, attended local secondary schools in Banjul. Our points of contact with Gambians became quite far-reaching. By the time we left the country in 1984, at the end of my two-year contract with the GTTI, we had an extensive network of colleagues, friends and acquaintances on which we would draw support years later. At this time we had not the slightest inkling of these future projects.

Halifax West High School 'Gambia Project 1'

In September 1984 I returned to my former position as vice principal of Halifax West High School, but was unable to leave the Gambia experience behind. Before the school year was out I began to explore with some of my high school students the idea of an educational visit to West Africa. The Halifax West High School Gambia Project was initiated in the spring of 1985. It was to involve several months of orientation and fund raising, culminating in a one-week trip to The Gambia in March 1986 by nineteen students and two teachers. I believe this was the first trip to sub-Saharan Africa by any group of Canadian high school students. Its uniqueness attracted a great deal of media attention in Canada and \$13,700 in financial support from the Secretary of State.

The project was conducted as a development education experience for the participants. It emphasized the concept of "learning by doing", of learning through active involvement.

The project, which has subsequently been called Gambia Project 1 (or simply Gambia 1), set out the principles which would govern future projects. It was conducted as a development education experience for the participants. It emphasized the concept of "learning by doing", of learning through active involvement. It included a development assistance component. It set out to establish linkages between groups and institutions in Nova Scotia and The Gambia.

We made use of a number of personal contacts in The Gambia in planning the agenda and liaising with local organizations, in particular the CUSO FSO Praimie Yip, her husband Stephen, who was working for CODE, and Makaireh N'Jie, the Director of the GTTI. Such contacts provided us with the opportunity to do what tourists usually cannot do — to visit schools, villages and rural development projects and to learn, at first hand, about some of the issues confronting a less developed country. We were able to reciprocate this hospitality by contributing, from fund raising, \$5,000 in development assistance to the schools and villages which we visited — a not inconsiderable achievement for a group of high school students who had had to find funds for most of their own travel and accommodation expenses.

From a long term perspective, one of the most valuable things we did was to establish a linkage between Halifax West High School and St. Peter's Technical High School, in the village of Lamin. This not only brought about a lot of personal interaction between students of the two schools, but brought Principal Ann Therese N'Dong and some key members of her staff into our network. Seven years later, some of the students of that original linkage are still writing to each other; St. Peter's continues to be an active partner in joint enterprises and Ann N'Dong has served on our Gambian Advisory Committee, along with Makaireh N'Jie and the Yips.

During the pre-trip phase of this project we stumbled upon a fund-raising activity which has contributed immensely to the building of our support network in Nova Scotia: the Annual African Dinner. The first of these, in February 1986, purporting to provide authentic African food, was a risky affair attended by more than 200 patrons at Halifax West High School and netting almost \$2,000 for development projects in The Gambia. The food was prepared by the participating students and their families and consisted of groundnut soup, chicken yasa, fresh pineapple and something alleged to be Jollof rice. Since then we have staged considerably improved versions of the African Dinner each year to increasingly larger audiences. The most recent dinner, in February 1992, at J.L. Ilsley High School in Halifax attracted 400 guests and featured African drummers and dancers, a display of African art and artifacts, and Ed Broadbent, President of the International Centre for Human Rights and Democratic Development, as guest speaker.

Our projects grew with our dinners, or vice versa, and our dinners became the occasion for an annual "State of the Project" report, the show-case for new projects, and a major bonding experience for each new project group which had to prepare the food, set the tables and create the ambiance. The yearly growth in the number of Gambians studying in Halifax, whom we could introduce at each dinner (and who would, thank heavens, assist with the preparation of the Jollof rice!), was another expression of the steady growth of our projects.

From a long term perspective, one of the most valuable things we did was to establish a linkage between Halifax West High School and St. Peter's Technical High School, in the village of Lamin.

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My daughter Sara, who was in grade twelve at Halifax West High School in 1985-86, was one of the nineteen students who made the initial trip to The Gambia. She was apprehensive about how her schoolmates would view life in the poor, unpretentious West African country to which she herself had grown so attached during the two years she had lived there. In retrospect, she felt that they had developed, if anything, a too positive view of life in The Gambia: wherever they went they were received with warm hospitality; they were feasted and feted by smiling, friendly people; and perhaps they tended to overlook the daily grind and the hardship of life in rural Africa. "It is an incredible experience to be with such caring people as the Gambians," said Tanya Hartlin, one of Sara's closest friends, in an interview with Halifax journalist Fran MacLean. "I was lucky to travel to The Gambia at my age and to meet the Gambians who are so sociable and nice to everyone. They have a real inner happiness and do not dwell on what they don't have."

Grade eleven student Mary MacKenzie worked as a baby-sitter and a church organist to raise the money to be involved in the project. As a result of her "first-ever" trip outside Canada, Mary told Fran MacLean that she was considering a career in development work:

She stayed with me all the time, holding my hand, and helped me over my new and strange feelings. We are now writing to each other."

At first, I felt uncomfortable by the extreme friendliness, the touching and eating from a single bowl. One of the St. Peter's girls noticed my feelings. She stayed with me all the time, holding my hand, and helped me over my new and strange feelings. We are now writing to each other.

Now, six years later, Mary is studying medicine at Dalhousie University. She attends practically all of the functions of the Nova Scotia — Gambia Association. She still hopes to do an internship or medical research in The Gambia or another African country.

For music teacher Jacqueline Harmer, who assisted me in the coordination of the project, "the most profound experience" of her first trip to Africa was a visit to Tankular, an isolated fishing village on the Gambia river, 150 kilometres from Banjul:

We glimpsed village life that we had only read about.

The children touched us, and held our hands, eager to meet Canadians and happy to be right with us. We glimpsed village life that we had only read about. In the community centre, we had formal exchanges with the chief and we saw a special part of their culture.

Mrs. Harmer visited The Gambia on three subsequent projects, and has been instrumental in establishing our connection with the Kafuta Village Day Care Centre, where she has had a Gambian foster child since 1986. She was the coordinator of two successful high school based projects in 1987-88 and 1988-89. She was a founding member of

the Nova Scotia — Gambia Association in 1989 and has served on the Executive of the Association.

Among the funds which we raised for this project, through contributions from the community and other fund raising activities, was a \$100 donation from "the Stewart family" which somehow, in retrospect, illustrates what is unique about the Gambia Project. Sheena Stewart was a participant in the first project while in grade twelve at Halifax West High School; in 1989, as a Dalhousie University student, she was elected to the first Board of Directors of the Nova Scotia — Gambia Association. Now she is working as a physiotherapist in Vancouver, but continues to hold a membership in the Association and continues to hope for an opportunity to participate in a future project where her professional skills could be utilized. Sheena's younger brother, Robin, visited The Gambia in 1989 as a participant in Project 5 and later served on the Board of Directors of the Association. Sheena and Robin's parents, Leslie and Margaret Stewart, and their maternal grandmother, Mrs. Jessie Sherry, have taken part in virtually every Gambia Project function since 1985.

In May 1986, I received a letter from Ann N'Dong which contained these words:

Everyone in St. Peter's, staff as well as students, were enthralled by the visit. I am certain they all look forward to more of such visits in the future....Regarding the continuation of the twinning program, I did mention in my speech that the visit signified the establishment of the twinning between the two schools on a more permanent basis. Unless you step down first, we are in it together.

The visit signified the establishment of the twinning between the two schools on a more permanent basis.

That the Gambia Project was initiated at a high school and continues to have a base in public schools in Nova Scotia is not only a mark of its individuality, but a tremendous source of strength and growth, given its particularly close links with the local community.

Gambia Project 2

The students' enthusiasm was infectious. It spread to staff members at Halifax West and to teachers in other schools and then to other institutions, including Dalhousie and Saint Mary's universities. By the fall of 1987 Louanne and I began planning what came to be known as Project 2.

At about the same time The Nova Scotia Agricultural College (NSAC) in Truro, in co-operation with the Association of Universities and Colleges in Canada (AUCC), was embarking on its own initial project in West Africa, a linkage with the School of Agriculture at Gambia College. This would involve the training of Gambian teachers and

administrators, and the provision of equipment and materials. It would also involve NSAC sending staff to The Gambia to conduct training programs and research into agricultural methods. Subsequently more than a dozen staff members from the two institutions have been involved in the exchange program. Louanne and I have assisted with the orientation of several NSAC staff as they prepared for their departure for The Gambia, and some of these same individuals, at the conclusion of their assignments, have returned the favour for groups involved in our projects. This kind of interaction has continued to the present, as the NSAC carries on with what is scheduled to be a ten year partnership with Gambia College.

The nucleus of the group had a direct connection with Halifax West High School and saw their project as an extension of the original initiative undertaken within the high school.

Project 2 involved twenty-two adults and three high school students, who participated in a six month development education program, culminating in a two week educational tour and working visit to The Gambia and Senegal in July 1987. The adults were professional or skilled persons, with a particular interest in international development; they were mainly educators, but of varied backgrounds. Three of the participants were from outside Nova Scotia — a teacher from Montreal, a technician with New Brunswick Telephone and a teaching-assistant from Moncton, N.B. The nucleus of the group had a direct connection with Halifax West High School and saw their project as an extension of the original initiative undertaken within the high school.

We established our goals clearly at a very early stage of the orientation program, and adhered to them throughout the project. Clearly they were the work of pragmatic do-gooders — they were ambitious and slightly idealistic, but basically practical and achievable. They were tested in the field and not found wanting. With luck and West Africa on our side we actually did what we set out to do.

It is exquisitely pragmatic that the primary goal of the project was based on the self-interest of the participants: it was to provide them with experience, insight and understanding of the aspirations, needs and problems of a developing country, both for their own edification and professional development and so that they might share this knowledge with other Canadians.

The occasional dedicated (or cynical) third-world field worker who baited us as naive do-gooders has been satisfied with an explication of our primary goal as based on a modest degree of self-interest. The goal was to learn, and the method was to learn by doing.

Our other basic goals followed naturally upon the first: to contribute to a heightened awareness of the third world in our region of Canada; to put The Gambia "on the map" in Nova Scotia and, if possible, in the rest of Canada; to become acquainted with Gambian colleagues in similar lines of work to our own and participate in joint inservice workshops with them; to help establish specific, mutually beneficial links between individuals and organizations in Nova Scotia and The Gambia; to create a new model for development education which could be used by other professional organizations; to help the participating teachers make effective use of development education concepts in their classrooms; and finally to produce a documentary video and other audio-visual materials based on our project which could be of value in implementing the above goals.

The goal was to learn... to contribute to a heightened awareness of the third world in our region of Canada; to put The Gambia "on the map" in Nova Scotia... to become acquainted with Gambian colleagues in similar lines of work... to help establish specific links between individuals and organizations.

The orientation consisted of a 54 hour development education program. It was conducted in cooperation with the International Education Centre of Saint Mary's University and involved seven full-day sessions over a six month period from January to June 1987. The program focused on development issues, as well as on the history, cultures, religions, political structures, and educational systems of The Gambia, Senegal, and West Africa in general. We made use of more than two dozen resource persons, including a number of Africans residing in Nova Scotia, and former CUSO and CIDA personnel who have worked in developing countries.

Fund Raising activities consisted mainly of the following: selling chocolate bars and "Magna Pockets", as well as raffle tickets on two African masks; putting on (and somehow pulling off) the Second Annual African Dinner for some 200 paying guests; and generally soliciting and accepting donations of money and materials from various individual and corporate donors. Our fund-raising activities were exclusively in support of schools and village development projects in The Gambia. We raised more than \$7,000 in cash and material contributions for this purpose. The field trip emphasized learning by doing, the establishment of institutional linkages between Canada and The Gambia, and collegial activities with teachers and other skilled or professional people. Our itinerary included:

The field trip emphasized learning by doing, the establishment of institutional linkages between Canada and The Gambia, and collegial activities with teachers and other skilled or professional people.

- a visit to a remote upriver fishing cooperative, where we presented a gift of some fishing nets, long lines and other equipment donated by the Eastern Fishermen's Federation of Nova Scotia;
- a working visit to CUSO sponsored rural development projects, where we helped villagers in a tree-planting project in areas threatened by drought;
- providing seed money for a soap-making cooperative in a women's centre in the village of Brikama, where some of our participants contributed two days work and moral support (mainly the latter);

- participating in inservice programs with the teaching staffs of Gambia College and St. Peter's Technical High School, and visiting several other schools and educational institutions throughout the country;
- assisting in a selected day care centre;
- visits to some of the main historic sites of The Gambia and Senegal, including Dakar, Isle de Gorée, the great mosque of Touba, the Museum of Black African Art in Dakar, the Abuko Nature Reserve, and, of course, the quaint old city of Banjul;
- a bus tour through a drought-stricken area of Senegal on the margin of the Sahel.

It is hard to say whether the project made the group or the group made the project!

It is hard to say whether the project made the group or the group made the project! Certainly there was a kind of melding which took place gradually through the six month orientation period, and then a bonding during the two days in London and the first few days on trek in the Gambia which brought almost everyone together with a sense of common purpose. Only two or three seemed to remain aloof from the group with personal agendas that took priority over the team concept. Even so, this was never a problem, nor was there anything forced or artificial about the teamwork. The pace was at times grueling, but the participants endured the sheer physical demands of heat and humidity, speeches and formalities, and waiting, waiting, waiting....and the inevitable diarrhea....with equanimity, good humour and an endearing frankness.

Every planned experience was enriched with ad hoc experiences.

It was truly a working holiday, but less holiday and more work than any of us had bargained for. Every planned experience was enriched with ad hoc experiences; every road was enriched with detours; every adventure had misadventures; we endured more and learned more than we would have believed possible. A lot of what was learned was learned in retrospect, in starlight discussions at the end of the day around the hotel pool or on a wharf along the river, or much later still, back home in Canada. Perhaps we are still learning, still defining what we learned.

On our return from West Africa, George Schuyler, Director of the I.E.C. of Saint Mary's University, conducted a full day debriefing session for the participants. Out of this came a decision by at least 15 members of the group to meet as an ongoing committee to consider other activities which might serve the goals of the project.

It was decided that immediate follow-up activities could include the following: the participants providing development education workshops for their colleagues at home; the continuing of institutional twinning relationships; teachers making use of development education models and concepts in their classes; and in general all participants using such opportunities as might arise to promote a better understanding of international development issues.

Some of the participants speculated on the feasibility of establishing such a network of individual and institutional connections between Nova Scotia (or the Maritimes) and West Africa as to provide a broad framework for further projects.

We had intended that our project achieve a multiplier effect. Clearly, with participants from more than a dozen places of work, we were in a position to reach a significant audience with our message. Our constituency in this regard included the following:

We had intended that our project achieve a multiplier effect.

- two universities;
- six public schools;
- five school boards;
- seven communities in three provinces;
- the Halifax YMCA;
- the Sisters of Charity in Halifax;
- the Nova Scotia Teachers Union (through the participation of its President, Karen Willis Duerden); and several other places of work.

One of our key aims was to develop in the participants and, through them, in the communities and institutions which they represented a heightened awareness of the less developed world and of international development issues in general. We also wanted to put The Gambia "on the map" in Nova Scotia and establish some linkages between schools and institutions in our two parts of the world. Through Project 2 we went a long way toward achieving these goals. Thousands of Nova Scotians had come to know something of The Gambia because of our activities and the accompanying publicity. All of the participants returned from Africa with a very positive attitude toward Africa and Africans and, by their own admission, with a great deal more knowledge (and, equally important, a great deal less ignorance) of that part of the world, its history, its achievements, its cultures, and its people. We acquired this knowledge not only by our visit to Africa, but also through the extensive orientation program which preceded the trip and enabled us to put our subsequent experiences in Africa in a broader perspective, than if we had simply been dropped in without preparation.

Thousands of Nova Scotians now know something of The Gambia.

The Projects "Thicken"

The project has gone on and on, as it was intended to, and may have acquired some sort of a life of its own. All or most of the participants seem to have made space in their individual futures for The Gambia, Africa, the "third world" and international development. What more can one ask from any development education project?

One of our achievements was the production of a feature length video documentary on the project. The story is narrated in the present tense, in the first person and in a personalized way, which has added to its

The documentary, which is simply entitled "The Gambia Project", had two public and numerous private showings.

immediacy and effectiveness. The documentary, which is simply entitled "The Gambia Project", had two public and numerous private showings. The first public showing was on the evening of September 19, 1987 at Halifax West High School, where it was viewed (by means of a large screen projector) by an audience of about 120.

The second public performance was on October 24, 1987 at the National Film board Theatre in Halifax as part of the Atlantic Film Festival. The following day at the Festival's Champaign Brunch in McKelvie's Restaurant "The Gambia Project" was presented with an "Award of Excellence" and a Moonsnail Trophy, as best English language video production at the Festival. In winning the award, our production came ahead of five CBC Atlantic regional television productions and about 30 other videos. More than 50 copies of the video have been distributed throughout Canada, but its main value to the Association has been in our own orientation programs.

Project 2 was also the root of Dalhousie University's interest in The Gambia. Scott Wood, research professor at Henson College, undertook his first trip to Africa on this project. Two years later he participated in Project 4, which was a credit course in Development Education conducted through the Dalhousie School of Education. The program was coordinated by Les Haley, Director of the School of Education, and myself. It featured a field trip to The Gambia in February 1989 for the 14 registered students, including six teachers with the Halifax District School Board. While in The Gambia, Professor Wood and Dr. Haley entered into negotiations with Ndondi N'Jie, Principal of Gambia College, to establish a partnership between the two institutions — one that was to be modeled upon the successful partnership between Gambia College and the NSAC. Scott Wood drafted the proposal, which was vetted by Dalhousie's Pearson Institute and forwarded to CIDA in the fall of 1989. Shortly thereafter Dalhousie was able to announce the establishment of a five year CIDA funded, \$900,000 linkage project with Gambia College, which would involve training of Gambian staff and the provision of equipment and education materials. In the meantime Dr. Haley was appointed Principal of the Nova Scotia Agricultural College in Truro and Professor Bruce Roald of the Dalhousie School of Education was appointed manager of the new CIDA project.

Clearly, the opportunities for co-operation and networking on both sides of the Atlantic had increased tremendously, especially as Scott Wood was soon to become Chair of the newly incorporated Nova Scotia — Gambia Association and Les Haley accepted a position on its Board of Directors, as did Professor Bruce Roald.

On December 7, 1989, the Nova Scotia — Gambia Association was incorporated.

On December 7, 1989, the Nova Scotia — Gambia Association was incorporated, under the Societies Act of Nova Scotia, with a fifteen person Board of Directors and a five person Executive. In its Mission Statement the association defined itself as "a voluntary non-profit

development education and assistance organization, dedicated to establishing linkages between Nova Scotia and The Gambia and creating opportunities for professional, education and cultural exchanges between Nova Scotians and Gambians for mutual benefit."

More Projects

Even with the establishment of the formal structure of an NGO and all our contacts with the universities, we continued to go back to our roots in public schools. Project 5 involved twenty-five students and three teachers from two Halifax high schools, Halifax West and J.L. Ilsley, in an intensive seven day development education visit to The Gambia in March 1990. This project was modeled upon its predecessors in 1986 and 1988. Projects 6 and 7 followed on the heels of this, in the spring and summer of 1990. The former involved a Dalhousie University credit course in International Development with a two-week field trip to The Gambia and the latter was a small, personalized project organized by so-called "veterans" of Project 2.

The projects were also becoming integrated, organically connected. Projects 6 and 7 were used to train coordinators for Project 8, a highly ambitious peer health education program conducted in both Nova Scotia and The Gambia, and some of the participants in Project 5 were selected as peer educators in this project. The association was now head-over-heels in Gambia projects and gasping for breath. Project 8, the 1990-91 Peer Health Education Project, brought together fifty-nine high school students and teachers from The Gambia and Nova Scotia in the delivery of an AIDS and drug education program to peer groups in both countries. St. Peter's Technical High School, our long-time partner, provided the sixteen students who made up the Gambian contingent. They were led by Principal Ann N'Dong, Vice Principal Alfred Manneh and teacher Patricia Massequoi. I served as project director and leader of the Nova Scotia group, comprised of forty students and teachers from Halifax, Truro and Cape Breton.

Originally, we had intended to involve two Halifax schools only, Halifax West and J.L. Ilsley, because of their historical association with the Gambia Project. However, as news of the project spread we were able to involve students and staff from Cabot High School in Cape Breton and Cobequid Education Centre (CEC) in Truro, as well as a health professional and a number of educators from other schools in the Truro area. This enhanced our capacity to deliver a development education message throughout the province. Teacher Gilles Poirier, a "veteran" of Project 2, coordinated the Cabot High students; Duncan Searle of Project 4 led the CEC group; Shirley Brown and Lorne Abramson of Project 6 were in charge of the Halifax West and J.L. Ilsley groups, respectively.

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With the assistance of a \$105,000 contribution by CIDA, the Gambian participants were brought to Nova Scotia for six weeks in August and September 1990. The training sessions took place over a four week period, followed by the delivery of the health education program to 600 students in eleven selected provincial schools. Then in April 1991, with the help of a \$10,000 grant from Participation Africa Canada, the Nova Scotian participants traveled to The Gambia, where they rejoined their counterparts and, working in teams of three, provided a similar program to 3,200 students in fourteen secondary schools throughout the country.

The orientation of the Gambians to Canada and their introduction to development issues were integral parts of their visit to Nova Scotia.

The orientation of the Gambians to Canada and their introduction to development issues were integral parts of their visit to Nova Scotia. A great deal of the cultural orientation occurred informally through the close interaction of the Nova Scotians and Gambians, especially when the Gambians were staying in the homes of their counterparts and attending school with them. The humour and songs of Gambian teachers Alfred Manneh and Patricia Massequoi were significant elements in the bonding which took place between and within the groups.

Perhaps the most moving experience of the whole orientation program was a one day visit to the Eskasoni (Micmac) Reserve in Cape Breton.

Perhaps the most moving experience of the whole orientation program was a one day visit to the Eskasoni (Micmac) Reserve in Cape Breton where, during the height of the highly publicized "Oka crisis" in Quebec, we were welcomed by the residents with great hospitality. While at Oka native peoples and the military were engaged in a tense confrontation, here at Eskasoni Gambians, Micmacs and other Nova Scotians interacted openly and warmly: we talked, we feasted, we arm-wrestled, we sang, we played African drums and danced, we played Micmac drums and danced — for hours. It was a day of intense bonding. Unforgettable.

As the health education presentations took shape it became clear that our greatest resources were the enthusiasm of the peer educators and their ability to interact personally with their peers. More and more we realized that the methodology should not be one of lecturing, demonstrating, or using visual aids, but an interactional, student-centred approach, emphasizing role playing, simulation games, and problem-solving.

Feedback

The positive feedback they garnered from their audiences encouraged them and gave them confidence.

They proved to be a dedicated, energetic and talented group of young people who approached a very complex and difficult set of goals with a dynamic mixture of enthusiasm and anxiety. They prepared themselves carefully, but knew they had to be ready for anything. Fortunately, they were well received everywhere. The positive feedback they garnered from their audiences encouraged them and gave them confidence — such as the individual evaluations written by students at John Martin

Junior High School in Dartmouth, Nova Scotia, to the J.L. Ilsley/St. Peter's team of Darren Watts, Allison Wrin and Joanna Bahoum.

This is a letter to tell you how much I enjoyed your class. Maybe you should take over the teacher's job. (Joke!) Well I really think you should go and teach other schools as well. I really learned a lot and had fun too. I really liked the skits because it learn [sic] about the kind of situations you can get in. Well I really hope you can come back again. Bye.

Thank you dearly for coming to our school and telling us about AIDS and drugs. The way you teach is especially good, it's like watching Improv.

I feel that these little 'skits' that you did were great. The way in which you told them are exactly the way it happens in real life.

I, Christopher D. Dube, liked I mean loved you guys and your talking about drugs and AIDS and I think it was a good idea to come to our school and talk to us. Also I think it was a good idea to bring Joanna from Gambia to talk to us.

Hi!...I sat in the easy chair at the back of the room....I learned about the different categories of drugs like mixed action, depressant, and instant [sic]....I also learned you cannot get AIDS from toilet seats, or mosquitoes, or holding a person's hand that has AIDS, or kissing a person with the AIDS virus....I also learned that condoms are made of donkey's skin, and latex condoms leak, I don't care I don't have sexual contact with anyone, I am too young for that, I don't wanna get pregnant. Everyone thinks Darren is gorgeous....Love your plays, dudes. Hope to see you again.

I think that you are getting through to us better than teachers. You make it enjoyable to learn about it. I also think that you took some pain away, because my cousin died of AIDS three weeks ago. So I would like you to become a Health teacher....Well I just want to say, I think you guys are O.K. and keep up the good work.

I think that you are getting through to us better than teachers. I would like you to become a Health teacher....

The feedback from Gambian classes was as positive as it had been in Nova Scotia. Some of the most flattering comments came, indirectly, from Gambian teachers. On several occasions a teacher would be observed leaving the classroom during one of the presentations to drag in a few of his colleagues to marvel at what was happening, so intense was the level of participation.

Dr. Cora, Director of the Gambian national program on AIDS and STDs, who provided us with information on STDs in The Gambia,

expressed his admiration for the peer education strategy we were using. He said that we were demonstrating a very practical method of getting the information out to a mass audience of young people in a compelling and effective manner.

Colin MacNeil of Cabot High described the experience of teaching in The Gambia in the following letter to one of the coordinators:

I like the feeling of excitement I got when I came out of a class that was interested and who got a lot out of it and you know that you and they had fun doing the presentations.

The presentations that I feared so much at the first were one of my favourite parts, once I got into the classroom and realized that I was actually teaching people things they did not already know....I like the feeling of excitement I got when I came out of a class that was interested and who got a lot out of it and you know that you and they had fun doing the presentations.

Sonia Black of CEC had the following to say about the whole Gambian experience:

While I was visiting Jean D'Arc's home [in The Gambia], her sister said to me, "I only wish we had more to give you like you gave Jean D'Arc [in Nova Scotia]," but the truth is they gave me more than I ever gave her....I feel a tug at my heart. I am amazed at how only two weeks in The Gambia has made such a difference to me and my outlook on life.

Because of the extensive orientation process, they were well prepared for the challenges offered by The Gambia.

The Nova Scotian participants, during their two week stay, visited almost every region of The Gambia and provided more than \$12,400 in material and financial assistance to schools and rural development projects. They spent time in Banjul and in a number of rural towns and villages. They ventured up river in a boat resembling the African Queen. They worked in numerous schools. They visited the homes of their Gambian friends, ate Gambian food throughout their stay, and got an inside view of Gambian culture. They saw great poverty, and comparative wealth, and came to appreciate the diversity and contrasts that make up life in a third world country today. Because of the extensive orientation process, they were well prepared for the challenges offered by The Gambia:

I knew what to expect in the schools, from the students, in the markets, culture, religion and traditional beliefs....I do not feel I experienced any culture shock....However, the reality that not everyone lives as [well as you] do goes to your heart.

(Jeff Chant, CEC)

This project reached a large number of people in Nova Scotia with a positive message about the third world and The Gambia. Since its inception, the Nova Scotian students and teachers had been making presentations to school, church and community groups. That work continued in the aftermath of the April visit to The Gambia, with virtually all participants making one or more presentations to some

group or other in the community. The seven students of Cobequid Education Centre in Truro, as well the five participating adults from that community, were especially ambitious, making approximately fifty distinct presentations. The total audience for all such presentations was in the thousands.

Media Coverage

The project had a high profile, even if fleetingly, in the Canadian media. There were four intensive items on regional television news programs, several local and regional radio interviews, and numerous photo stories and human interest articles in local and provincial newspapers.

In The Gambia media coverage was, in proportional terms, even greater. For four days before we arrived, our pending visit and the Peer Health Education Project were headline items on the national news on the radio. This kind of radio interest continued through our two week visit, and was complemented by more modest coverage in the newspapers. As we traveled throughout the country we found that people knew about us and the project.

His Excellency Bakary Dabo, Vice President and Minister of Education, Youth and Sports for The Gambia, received all fifty-nine of the Nova Scotian and Gambian participants in his office at State House and spent three-quarters of an hour chatting with us. He expressed great appreciation for the linkage work which has been undertaken by the Nova Scotia — Gambia Association. The high point of this event for Gambian student David Jawo was that he got to sit at the Vice President's desk. Afterwards his friends began addressing him as "Your Excellency."

As we traveled throughout the country we found that people knew about us and the project.

Afterwards his friends began addressing him as "Your Excellency."

The program reached a combined Nova Scotian and Gambian audience of about 3,800 in about 25 schools. Presentations by the participants on matters relevant to Africa and international development reached a further audience in Nova Scotia in excess of 4,000. The extensive media coverage of the project in both countries assured us that the basic message of the project was delivered, at least briefly, to hundreds of thousands of persons.

Participants' Reactions

The greatest impact, however, was felt by the participants:

When I originally signed up for the project, I had been prompted by the tales told to me of previous Gambia Projects. Everything recounted to me seemed to say that this was no ordinary school trip....What did the Project mean to me?

The purpose of the program was to empower them to develop and organize meaningful peer health education programs in their own schools.

I can't think of anything that has changed or will change my life more than the Peer Health Project....I learnt and experienced things that I can use to help me in life, things that will help [others]."

Students, when encouraged, are tremendously helpful to each other. They are like a cell, a revolutionary cell.

Hope! The people of The Gambia made the best of their situation....and they had a deeper understanding of the important aspects of life....[The Project] was possibly the most positive thing that has thus far happened to me.

(Michelle Zwicker, Halifax West)

[Although I am] only a young individual when it comes to experiencing life, I can't think of anything that has changed or will change my life more than the Peer Health Project....I learnt and experienced things that I can use to help me in life, things that will help [others].

(Craig Peterson, CEC)

In trying to bring home the values of smart decision-making to students in Gambia and Nova Scotia, I brought home these values to myself. It also felt good to be teaching such important lessons to my peers.

(Peter Christensen, Halifax West)

Aja Kaddy Jaiteh, a female student at St. Peter's, may have expressed it best:

Life in The Gambia is the same. There are no changes. But I have changed. I read a book about education and the community which said this: each community is a powerful force for effective learning. Students, when encouraged, are tremendously helpful to each other. They are like a cell, a revolutionary cell. It is the cell in which the mutual learning and instruction can occur....This is what the group was like.

Projects Nine and Ten

Project 8 was nominated, in the spring, of 1992, by the Secretary of State as one of Canada's two official entries for the prestigious Commonwealth Youth Service Award. By this time a group drawn from the participants was already embarking on a spin-off project. Under the leadership of Lorne Abramson and Alfred Manneh, and funded in part by a \$65,000 matching grant from Partnership Africa Canada, Project 9 provided about 200 selected Gambian high school students and 20 teachers with up-to-date information on AIDS and drug abuse, as well as training in methodologies of interactional peer education. These teachers and students represented 17 Gambian high schools from throughout the country. The purpose of the program was to empower them to develop and organize meaningful peer health education programs in their own schools.

The training programs were conducted by a joint team of eight Nova Scotian and eleven Gambian "graduates" of Project 8. The trainers were chosen from a large group of applicants on the basis of experience,

communication skills, commitment, maturity and leadership. Karen McSweeney of Halifax sacrificed taking part in her graduation exercises at the University of King's College to serve as Assistant Director of the Project.

The Canadian participants flew to The Gambia on May 3, 1992 for the six week project, but many months of preparatory work had to be done on both sides of the Atlantic prior to that date. The latest information on AIDS and drug abuse was assembled in the form of a reference booklet. Three hundred bound sets of these booklets, along with 300 training manuals developed specifically for this project, were produced and shipped to The Gambia.

The Nova Scotian team members returned home on June 9, 1992 and made a full report on the project to the Annual Meeting of the NSGA on June 14 in Halifax. I had the pleasure of arriving in The Gambia a few weeks later and receiving very favourable reports from teachers and students from schools throughout the country about the success of the program. I also had meetings with the Gambian trainers, most of whom had now graduated from St. Peter's High School and were studying for their A-levels at Gambia High School. They expressed, in terms that would warm the heart of any proponent of sustainable development, a clear commitment to carrying on the peer health education program through the establishment of a working committee composed of themselves and some of the most interested teachers from the participating schools.

Wherever I went I seemed to be treading in the footsteps of Lorne Abramson's group. At Limbambulu Bamboo, for example, along with about seventeen other Canadians, I participated in the "maiden voyage" of a metal boat which had been provided to this remote village through funds raised by our predecessors. This simple boat, nicknamed "Abe," (Abramson's nickname) would make a dramatic difference to the lives of the villagers, enabling them to cross to the south bank of the Gambia River and obtain access to the markets of Basse and the paved highway to Banjul. It was an emotional experience to spend the mid-day dancing and feasting with the villagers, then to walk with them excitedly along the narrow path to the river to see a bright red 20-foot boat with the words "Funded by the Nova Scotia — Gambia Association", painted along the full length of the side. Here we had a graphic illustration of the profound disparities between the have and the have-not nations of the world — and of how significant can be the value of the most modest forms of assistance.

The business which had taken me to The Gambia at this time was Project 10. The NSGA had been awarded a \$92,000 matching grant from CIDA to pilot a summer school in The Gambia during July and August.

Wherever I went I seemed to be treading in the footsteps of Lorne Abramson's group. At Limbambulu Bamboo, for example, along with about seventeen other Canadians, I participated in the "maiden voyage" of a metal boat which had been provided to this remote village through funds raised by our predecessors.

The demand was so great that we accepted more than 270 students from 15 schools, and had to turn down many others.

This new project was intended to reach 240 students from 10 selected secondary schools in Forms I to IV. We invited the schools to choose only conscientious students who were educationally at-risk because of skill deficiencies in English or Mathematics and who would benefit from individualized attention, but whose families did not have the resources to provide the tutoring assistance which was commonly available to the more well-to-do students in the urban areas. In fact the demand was so great that we accepted more than 270 students from 15 schools, and had to turn down many others.

A group of seventeen Education students from Dalhousie University and an equal number of Gambian teachers, most of them recent graduates of the Gambia College School of Education, were charged with the responsibility of developing appropriate curricula and delivering an interactional, student-centred program which would emphasize skill development and "learning by doing." Instructional strategies were to include team-teaching, small group work, and a lot of attention to the specific needs of individual students. That these thirty-four educators, most of them with very little teaching experience, were able to come together in a team-teaching pilot project and accomplish these goals was a significant achievement.

We advised them to avoid a western cultural bias and to seek out materials to which African students could easily relate.

A few months earlier, we had provided the Dalhousie student-teachers with syllabi, course descriptions and some textbooks for the English Language and Mathematics programs in use in Gambian schools. It was not our intention to replicate the existing curricula or make use of materials with which the students were already familiar. We instructed the participants to study the syllabi and decide what skills the Gambian students would need to master the programs. Then we asked them to find appropriate curriculum materials and draft an activity-based program which would focus on the development of those skills. We advised them to avoid a western cultural bias and to seek out materials to which African students could easily relate. We also made it clear that, when they arrived in The Gambia and began collaborating with their Gambian colleagues, they would have to be prepared to modify and revise practically everything they had done and even to jettison (impassionately!) some of the materials on which they had worked the hardest.

We were concerned that we might appear, in our efforts to be thoroughly prepared for the teaching responsibilities ahead, to be imposing our own curricula upon the Gambian teachers.

The Canadians arrived in The Gambia on July 13 and began working with their Gambian counterparts on the 14th. We were concerned that we might appear, in our efforts to be thoroughly prepared for the teaching responsibilities ahead, to be imposing our own curricula upon the Gambian teachers. If there were any problems of this nature, they did not appear to be significant. Indeed the Gambians expressed pleasure at how well prepared the Canadians were; they were especially pleased with the variety and the practicality of the supplies which we brought — paper of all kinds and colours, chalk, pens, pencils, erasers, scissors, compasses and protractors, graphing calculators, novels,

reference books, hundreds of duplicated pages of math problems, and anthologies of short stories, poems and essays.

We had invited Alfred Manneh to take on the responsibility of principal of the summer school and work on the selection of staff and students. Mr. Manneh was chosen because of his good work as a teacher/coordinator in the Peer Health Education Projects and his exposure through those projects to the kind of teaching strategies which we would be implementing in the summer school. In a taped interview in Nova Scotia in 1990, Mr. Manneh had made the following observation:

Back at home the classroom is very much teacher-centred. Coming here [to Nova Scotia] you see a big difference in that the emphasis is on the participation of students....We have to work to a very strict schedule [in The Gambia]....to satisfy the needs of a syllabus which does not allow for very much freedom. But I still think that within that close situation it pays to be a little more creative and....to get the students more involved in what is actually taught in class....When I go back home I intend very much to apply this method....I have seen it being practiced and I am amazed at the results.

I still think that within that close situation it pays to be a little more creative... When I go back home I intend very much to apply this method....

Mr. Manneh arranged for us to rent the facilities of St. Therese's Secondary Technical School in Kanifing for the summer school. It is located on Kairaba Avenue within a hundred or so metres of its junction with the Banjul — Serrekunda highway, perhaps the busiest intersection in the country. We were only about 10 kilometres from Banjul in the heart of the urban sprawl of Serrekunda, Bakau, and Fajara, the most densely populated part of the country. We could not have chosen a location accessible to a larger number of potential students. Students who registered for the summer school from distant rural areas like Basse or Georgetown were able to find accommodation with relatives or friends in the Serrekunda area. Students and teachers from towns as far away as Brikama (30 kilometres) had daily access to relatively inexpensive transportation. And for the Canadians it was only a 30 minute walk from their rented houses to school each day.

St. Therese's provided us with the use of eight classrooms, with basic furnishing and usable chalkboards, as well as two staff rooms, one locked storage room, and a telephone. The compound had an abundance of shade trees, under which a great deal of the small group work took place. There were times in the course of a school day when one might observe five or six groups scattered across the compound rehearsing or presenting plays, reading aloud or silently, holding debates or discussions, drawing geometrical figures in the sand, or doing activity-based mathematical problems. There were deficiencies in equipment and facilities (e.g. the lack of visual aids; no electricity in the classrooms), but this quaint compound seemed at times an almost idyllic educational setting. I believe that we all grew very fond of it.

The compound had an abundance of shade trees, under which a great deal of the small group work took place.

The most serious discipline problem related to whether two or three students should be allowed to wear baseball hats in class! Attendance and punctuality were excellent. Only a handful of students did not complete the program, in most cases because of personal or family matters.

The teachers found it a bit awkward, but also very stimulating, to work in teams of four.

For the most part, the curriculum materials which we had brought proved useful and appropriate. The Math workbooks and the English language novels and stories were greatly appreciated, especially those which had African content. The teachers found it a bit awkward, but also very stimulating, to work in teams of four. They learned a great deal from each other and found opportunities in class and at team meetings to exchange ideas and strategies. The students were more than pleased with the individual attention which they received from a group of friendly and enthusiastic teachers who brought interesting activities and enjoyable new approaches to the learning process.

What I liked best about the summer school was the system of learning.

What I liked best about the summer school was the system of learning, that is doing some work and after a while, refreshing our minds with puzzles or tricky games and so on. I like this system because Maths, for me, looks difficult, but with these small games in class Maths is now not so difficult as I thought it was.

(Unsigned evaluation, Math I)

The fun I had during the classes. We did spelling which was fair for us and we played many games, like [spelling] baseball, brainstorm and ice-breaker....Lastly the hardworkingness of the teachers....I promise I'll never forget the good help you have given to me and my friends as well.

(Lamin F. Jammeh, English II)

A common refrain in the written evaluations passed in by students was that the summer program had done a great deal to build up their confidence and self-esteem. They were proud of their accomplishments and identified themselves as having acquired new or improved communications skills.

It is from [these] summer studies that I learned to work entirely on my own.

It is from [these] summer studies that I learned to work entirely on my own.

(Ousman M. Jawo, English II)

It improved my grammar, the way I should speak to people and the way I should answer them. It helped me to write very good letters, compositions, stories and also I can write something and give it to the newscasters to publicize....

(Camara Jarjou, English I)

We did drama and I liked that best....You know, it stirred me with the courage to speak up in front of an audience.

(Denanie Sillah, English III)

The only "complaints" registered by students (apart from one who found the wooden chairs hard on his back!) were that the school day was not long enough and the summer session too brief. Clearly the students regarded the summer school as a tremendous learning experience, and were most appreciative of the way they were treated. The unintentional humour of some of their comments does not detract from the value of their perceptions.

I love to say my feelings, I don't like hiding them. The summer school has helped me learn a lot about Maths and how to make difficult things easy....God would Bless you for helping those who need help in their weak subjects, especially ...me. I always pray for you all.

(Unsigned evaluation, Math I)

The summer school program has been very effective. through the kindness and clarity of teaching and understanding from both sets of teachers I have developed a sense of courage and hope in attempting and working out my math problems that I have never before experienced. I used to fear math and would tell myself that my brain just couldn't take its complexity and I often felt like giving the subject up. But....from what I've learned this summer, I have come to realize its superior importance and need in life. I have also become more optimistic and confident in approaching [it]. Now I feel a lot safer about tackling the challenge!

(Rashida Jones, Math IV)

I have developed a sense of courage and hope.

The most important thing I have learned is to express myself plainly in English.

(Ousman M. Jawo, English II)

Anyway, the summer school has helped me a lot to improve my skills in English. there was a time when I hardly understood whatever I read, but when we read "The Magic Pool" and "As The Night The Day" I understood them very easily. This is because I paid attention and asked questions about what I did not understand. I also improved in oral [English] and grammar. I could do this because I always try to speak English with my mates. Sometimes when I am wrong they rectify me.

(Muhamed Hardi Jallow, English II)

I have learned a lot about grammar, sentence structure, punctuation, spelling, group working, and writing....Now I can thank to god and the organizers of this summer school.

(Matarr Kolley, English II)

Mrs. Anna J. Williams, a respected Gambian educator told the students that the opportunities provided by the summer school for their academic development were "remarkable".

Mrs. Anna J. Williams, a respected Gambian educator and a Chief Examiner of the West African Examinations Council, in her keynote address at the graduation exercises on August 22, told the students that the opportunities provided by the summer school for their academic development were "remarkable":

When I visited the summer school sessionI was immediately struck by the small tutorial groups, assisted by two or more instructors, operating in a totally relaxed atmosphere in the shade of the trees! From my observation, all the students were participating very effectively....I am positive that you all benefited immensely from the extra instructional support, not only from your teachers but also from your classmates through constant peer-interaction. The training you have received should encourage you to actively participate in class in the future....The summer school, if sustained, will certainly have an impact on education in The Gambia.

The Canadian teachers enjoyed their students immensely. For most of them, it was their first real teaching experience and a wonderful beginning to their teaching career. The School of Education of Dalhousie University had indicated its strong interest in a continuing involvement with this program as a means of providing a unique teaching experience for its students and to stimulate in them an interest in global development issues. The Faculty of Education at Saint Mary's University in Halifax has also reacted positively to an invitation to have its student-teachers involved in the program. And certainly, by one means or another, Gambian institutions and teachers seem to be prepared to work in partnership with the NSGA on useful educational projects such as this.

I believe that this project has a future not only in The Gambia but as a prototype for institutional cooperation in other third world countries.

I believe that this project has a future not only in The Gambia but as a prototype for institutional cooperation in other third world countries. We have barely scratched the surface of the need for this kind of focused upgrading program for high school students in The Gambia or elsewhere, and we have barely scratched the surface of the desire by Nova Scotians to be involved in meaningful work in the less developed countries of the world.

That they would undertake this initiative largely at their own expense reflects not only the high level of their personal commitment to development work, but a long tradition in our projects.

A self-initiated, self-financed small project undertaken in the summer of 1992 by two Nova Scotian professionals with more than 30 years experience as school guidance counselors illustrates this point very well, June Boswell, Head of Guidance at Halifax West High School (and a veteran of Project 2), and Elizabeth Brown, a recently retired counselor from the Dartmouth, N.S., School Board, spent three weeks in The Gambia in July and August exploring with Gambian counselors, teachers, students and Ministry of Education officials issues related to students' guidance needs and the professional development of counselors. That they would undertake this initiative largely at their

own expense reflects not only the high level of their personal commitment to development work, but a long tradition in our projects.

In cooperation with the Ministry of Education, Mrs. Boswell and Ms. Brown conducted a one day in-service program for principals, teachers and counselors from schools in Banjul and assisted in setting out a one-year plan of action for an informal counselors' association in that city. Some of their other activities, in an ambitious schedule, included conducting a job-survey exercise with the students of the NSGA summer school and following up on initiatives taken earlier by Dr. Jim Manos and Elizabeth Semple of the Dalhousie — Gambia College linkage. While in The Gambia Mrs. Boswell also had meetings with Sebastian N'Jie, an instructor in Guidance Counseling at Gambia College who was to commence a Masters program in Education at Dalhousie University in September 1992, with a work-placement in the Guidance Department of her school.

This project, along with the summer school and the two Peer Health Education Projects which preceded it, have added substantially to the NSGA's networks in The Gambia and Nova Scotia. We have worked with administrators and teachers in practically every secondary school in the Gambia; we have a working relationship with the Gambia Technical Training Institute, Gambia College, the Gambia Teachers Union and CUSO — Gambia; we have received personal encouragement and advice from the Minister of Education and the Minister of Finance (the former Vice President of The Gambia), who are both well acquainted with our projects; and we have been officially registered as an NGO in The Gambia. Indeed we have a small multitude of organizations and institutions in Nova Scotia and the Gambia which have interfaced with each other. Many of these have not even been mentioned in this article. Our network in Canada has even begun to extend beyond Nova Scotia. For example, we have just been contacted by a high school in Winnipeg which would like to become involved with us in a joint venture in The Gambia. We have also just received a request from the co-operative education (work experience) program of a large school board in Ontario to place a group of six to eight high school students in one of our overseas work projects. So where do we go next? What are we going to do with all these networking opportunities?

At a Crossroads

Our activities in the area of development education and development assistance in the past seven years have been significant: with shoe-string budgets, we have provided more than 200 Canadians (ages 15 to 60) with a first-hand experience of the problems, needs and not inconsiderable achievements of one of the poorest countries in Africa, and helped them develop an informed commitment to international development; by a variety of grassroots fundraising activities we have raised more than \$400,000 to support our educational activities and a

With shoe-string budgets, we have provided more than 200 Canadians with a first-hand experience of the problems, needs and not inconsiderable achievements of one of the poorest countries in Africa.

further \$60,000 in direct assistance to schools and rural development projects in The Gambia. In addition we have attracted more than \$400,000 in matching grants from CIDA and Partnership Africa-Canada to assist with these projects. These are significant achievements for a volunteer based organization which until recently was operating without an office or paid staff.

Now we are at a crossroads. We have more networking opportunities and project ideas than we can handle. We are receiving requests for assistance of all kinds in The Gambia, most recently to provide training workshops for day care teachers and professional development for school guidance counselors. We have stirred the hearts and imaginations of hundreds of Nova Scotians and other Canadians, who want to become involved in this kind of community based international development work. Our project "veterans" are energized and eager to continue their participation. We are now planning our "Third Annual Summer School" with the participation of B.Ed. students from three Halifax Universities — Dalhousie, Saint Mary's and Mount Saint Vincent. We involved the Black United Front in Project 11, an environmental project for high school students. We hope to involve the native community of the Province in future projects. Clearly, despite ambitious goals, we now have created even greater expectations, both in Nova Scotia and The Gambia. How do we funnel the energy that is coming our way into really useful channels? How do we fulfill these expectations?

How do we funnel the energy that is coming our way into really useful channels? How do we fulfill these expectations?

The Nova Scotia — Gambia Association is committed to a long-term educational linkage program in The Gambia and to maintain an ongoing partnership with Gambian institutions to sustain all worthwhile endeavours which we jointly initiate. But this is easier said than done. Clearly, if we are going to do anything more than organize on a project by project basis, we have to move to a more complex organizational structure. We will require paid staff in Nova Scotia (at least one person) and a small staff and field office in The Gambia, and we will need more than project by project funding. How do we now move to a more bureaucratic structure without losing the enthusiasm of volunteers, the community base, the personalized collegial approach to our partnerships in The Gambia, the quality control, and so many of the other things that have made the Gambia Project unique? This is the question now before us.

Lessons Learned

To those of us who have been intimately involved with the Gambia Project, the whole process seems to have taken on a life of its own; it is an opus based on a shared experience and shared vision, a complex work in progress — like a novel with many different writers and many chapters still demanding to be written.

What we have learned from this is that individuals can become as creatively energetic doing development work as, for example, collaborating on the production of an original stage-play. Working together in a small international "theatre" (a theatre of peace) with imagination, commitment and shared goals, they can bring into existence a whole complex of new and valuable inter-cultural relationships, linkages and institutions.

Networking is the lifeline of community development, whether the community be a local village or the global village. Networking is, in essence, not only the setting up of new linkages but the recognition and affirmation of parallels and connections which have always been there, waiting to be used. For the Nova Scotia — Gambia Association, networking has involved bringing together for constructive purposes existing parallel groupings in Nova Scotia and The Gambia. The result of this process is not only to have Nova Scotians and Gambians working together, but Gambians working more effectively with Gambians, and Nova Scotians with Nova Scotians. The energy potential of such cross-cultural networks in the sharing of ideas, skills, experience and creative enthusiasm, is immense. The process of sharing is akin to inter-cultural brainstorming.

A third lesson is that community-based development networks can be effectively centred around public high schools, where community support is easier to obtain than, say at a University.

A fourth lesson we have learned is the vital importance of an extensive orientation program for persons going to do field work or to study in another country. Even a very brief stay in the field of, say, one or two weeks requires almost as much orientation as a long-term assignment. If a one-week visit in the field is to be of maximum educational value, the visitor must be in a position to take full advantage of his powers of observation. Inadequate or haphazard pre-trip preparation is a prescription for failure in any project. An effective orientation program is one which is not only thorough in its coverage of the history, politics, economics, development, literature, religion, language and culture of the "other" country, but which has two other qualities: intensity of experiential content, through simulation exercises, problem solving, role playing, and so on, and duration in time. The latter is crucial: cultural orientation cannot be a crash course taken the week before you leave for your assignment or, worse still, the week after you arrive there. Fortunately, this is a lesson which we learned almost at the beginning of our activities and it has done a great deal to assure the success of all of our projects to date.

The age factor comprises the fifth lesson. No one is too old or too young to learn or to have his or her perspective, and perhaps life, changed by a cross-cultural, development education experience. To date the youngest participant in one of our projects was a fourteen year old

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No one is too old or too young to learn.

another young student, the logo which now serves the NSGA so strikingly on our letterhead. The logo neatly depicts what the Gambia projects have been all about. The oldest participants to date have been a sixty-something couple on the same project as the young artist. That was in 1987. They are now planning to lead a project of their own in 1994. In response to a request from the Christian Children's Fund in The Gambia they hope to be conducting, with several colleagues, a training program for hitherto untrained day care personnel in a number of day care centres in the rural areas of the country.

Ordinary people from all walks of life can participate effectively in international development work — just as ordinary people form all walks of life, if they are given any kind of an opportunity, can become actors, stage-hands, or producers in a stage-play.

Implicit in almost everything we have learned through the Gambia Project is the most important lesson of all: ordinary people from all walks of life can participate effectively in international development work — just as ordinary people form all walks of life, if they are given any kind of an opportunity, can become actors, stage-hands, or producers in a stage-play. The opportunities for learning and doing provided by the Gambia Project have attracted ordinary (and perhaps a few extraordinary) people of diverse ages, education and backgrounds, who defy the current cynicism. They personally bear witness that practically any of us can become truly energized and effective when confronted with practical ideals, achievable goals and an interesting, challenging process.

In February 1994 The Nova Scotia-Gambia Association received funding for two major projects:

1. \$64,000 from CIDA for an eight month project working with street children and other children in difficult circumstances in The Gambia. Main Partners: Dalhousie University Faculty of Medicine, Gambia Islamic Relief Services, African Centre for Democracy and Human Rights Studies and Defence for Children International.
2. \$730,000 from the Partners for Children Fund of Health Canada for a two year project to establish youth health education centres in high schools throughout The Gambia. Main Partners: Gambian Ministry of Education and Health-Related Facilities of Dalhousie, Mount Saint Vincent and Saint Mary's Universities.

The scope of these projects has required the NSGA to open small offices in downtown Halifax and The Gambia.

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THE DALHOUSIE/TANZANIA NURSING EDUCATION PROJECT

by Heather Fraser-Davey and Lynn Burgess

Introduction & Background

In the early 1980s, a Tanzanian nurse-teacher was a masters student at the Northwestern State University of Louisiana. Later, in 1985, her mentor became the Director of the School of Nursing at Dalhousie University, Canada. In 1986, Dalhousie University's School of Nursing hosted the International Congress on Women's Health Issues and the Director invited her former student to attend. Thus started the relationship between Dalhousie University and Muhimbili Medical Centre, Department of Nursing Education. By the time the Tanzanian guest left that conference, she had received a commitment from interested Dalhousie faculty to correspond and work towards a proposal which would link the two schools and assist the Tanzanian school in their efforts to establish a baccalaureate program in nursing.

In 1986, Dalhousie University's School of Nursing hosted the International Congress on Women's Health Issues and the Director invited her former student to attend. Thus started the relationship between Dalhousie University and Muhimbili Medical Centre.

CIDA approved the project for five years in April, 1988; total budget was \$1,545,000 (CIDA's contribution \$1,040,000; Dalhousie's contribution \$379,000; and Muhimbili's contribution, \$126,000). In the School of Nursing at Dalhousie, project directorship was determined, a part-time coordinator was hired, and an Advisory Committee was established. In Tanzania, the project was directed by the head of the Nursing Education Department and a Curriculum Committee was formed in the Faculty of Medicine. A site visit (Dalhousie to Tanzania) took place immediately and the process of selecting and admitting students to Dalhousie's BScN program began.

At this point, it is important to state that all the time this project was being developed and during the first half of its implementation, the Government of the United Republic of Tanzania and senior administrators of the University of Dar es Salaam and Muhimbili Medical Centre were planning major administrative changes for the medical school. By an Act of Parliament in April, 1991, the schools and faculties of the University of Dar es Salaam, located at Muhimbili Medical Centre became the Muhimbili University College of Health Sciences (MUCHS). This new administrative structure was officially

recognized on July 1, 1991, at which time the Faculty of Nursing was also formed. Initially, Mrs. Pauline Mella became the Coordinator of this Faculty; later she was appointed Dean. Under the new structure, the original Curriculum Committee was replaced by an Advisory Committee.

This project links two institutions in vastly different countries. Although the population, mainly rural, of Tanzania is approximately the same as Canada, the country is one-tenth the size. Tanzania is just south of the equator and borders the Indian Ocean. Its government is socialist, its main religions are Christian, Hindu and Islam. The national language is Swahili; the language of higher education and business is English. Average life span is some 52 years. Leading causes of hospital admission and death include malaria, diarrhoeal diseases, malnutrition, measles, and pneumonias. At the beginning of the project, the head of the school was the only Masters prepared Nurse in Tanzania and there were only two baccalaureate prepared nurses in the entire country. Tanzania has diploma programs for Level I and Level II nurses, as well as upgrading courses and a diploma program for nurse teachers.

Goals & Objectives

The overall goal of the project was to educate the educators and develop nursing leaders for primary health care.

The overall goal of the project, as it developed, was to educate the educators and develop nursing leaders for primary health care, who would help to meet the real health needs and demands of the population they serve. MUCHS had developed a curriculum for a baccalaureate program in nursing, but needed assistance in implementing it.

Specific objectives of the project were:

- 1) To graduate, by April 1993, a total of six Tanzanian nurses with a Bachelor of Science in Nursing from Dalhousie University;
- 2) To graduate, by 1993, three nurses with a Master of Nursing degree from Dalhousie University;
- 3) To assist in the development of the BScN program at Muhimbili Medical Centre, with admission of the first class projected as 1988-89;
- 4) To ensure adequate learning resources for the students.

Project Results

These objectives have been realized in varying degrees of completeness.

The ultimate benefits of the project should be to the country's people in the area of health and the health care system. Educating the educators is seen as a most effective method of fostering independence. It is assumed that nurses who have well-developed skills will be able to adapt their practice to their own natural setting and resources. Secondary outcomes are a higher standard of education for women which may impact on improved levels of health in families and communities.

Educating the educators is seen as a most effective method of fostering independence.

Educating the Educators

As a result of the project, four Tanzanian nurses have returned home with BScN degrees from Dalhousie University; and three others (two of whom also completed BScNs at Dalhousie before continuing) were successful in completing Masters of Nursing. They have all assumed faculty positions in the newly formed Faculty of Nursing and have been assigned teaching responsibilities, where possible close to their interests and fields of study. Being part of Tanzania's cultural and sociopolitical reality, it is expected they will be able to shape nursing to meet the health needs and priorities of their country. In fact, one of the Masters graduates, who completed her thesis in the area of nurses caring for patients with AIDS, has already become involved in a new project with the Ministry of Health, the purpose being to guide the Ministry in the development of a proper curriculum for health professional schools on AIDS and Sexually Transmitted Diseases. Many challenges face these new faculty members. The challenges of remaining current in their fields, of continuing some involvement in research, of adapting teaching methods and subject matter to the cultural context in which they work (one which places little social/academic value on nursing and/or women's work), of working within the physical constraints of lack of office space and teaching space, and of carving an appropriate niche in the health care system for baccalaureate trained nurses — will all require a wisdom, personal constraint and commitment for which they have not been directly trained. It remains to be seen whether they will be able to sustain a successful Faculty of Nursing.

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Dalhousie accepted the students under the "mature student" policy, allowing for waiver of some of those requirements based on our Nova Scotia school system and registered nurses association. It became apparent, when students were being assigned clinical placements, that negotiations with the local teaching hospitals and registering body had been inadequate in terms of arranging appropriate placements for those who did not have provincial registration. The result was less than ideal clinical placements for some students.

Given the opportunity to start from the beginning again, this initial orientation process would be yet further expanded and provided in some more detail, leaving less to assumption.

Each student or pair of students arrived in Halifax sufficiently in advance of the start of classes to allow for an initial orientation program to settle them into the economic and social system, living arrangements, and university setting. This orientation was refined as further students arrived and start-up problems were less significant than anticipated. Given the opportunity to start from the beginning again, this initial orientation process would be yet further expanded and provided in some more detail, leaving less to assumption. In particular, it would have been very helpful to students and project staff to be very explicit about financial allowances and arrangements of every kind, in order to avoid the potentially embarrassing situations which can occur for no other reason than misunderstanding based on different practices to which each is accustomed. In addition, the resources of CIDA's Briefing Centre and In-Country Orientation Program should not be overlooked. CIDA assisted in the debriefing of the students as they returned home and some very useful insights were made through that process. Finally, the students themselves suggested, in debriefing discussions, that some kind of a formal briefing for faculty and staff who would be involved with teaching the students might have been helpful in eliminating some of the misunderstandings and confusion which existed early on.

Students were closely monitored and evaluated (formally and informally) in an ongoing way. Students were encouraged to self-evaluate and this ability increased; however, it was noted that this type of self-disclosure was not a favored exercise. The practice was not let go but the expectation for sharing was decreased as the project director felt her own ideas were in conflict with the students' cultural values. The Tanzanian partner was kept informed of students' status by way of generalized written reports and interviews with the students during their home visits.

Some group meetings were held yearly to discuss project happenings and needs other than academic.

Some group meetings were held yearly to discuss project happenings and needs other than academic. During these meetings, we were better able to evaluate students' costs and expenditures that might be reconsidered for future proposals. Book allowances, for instance, were very low, especially for a health related field. The allowable CIDA book allowance had to be doubled to be adequate for our students. Allowances had not been made for such vast increases in travel, tuition, and living costs or innovative new taxation in Canada. The students were assisted in formulating a joint letter to CIDA appealing for a review of living allowances. That increase, as well as an increase in the book allowance, has now been put in place. Great dissatisfaction was expressed by some nurse-teachers on the expenses for typing papers, local travel, and research. As mentioned earlier, many financial "problems" could have been avoided if financial arrangements had been more clearly defined during the orientation process. Although the nurse-teachers were part of the Nursing Education Department prior to their coming, they had not been given the opportunity to read the project documentation. The perceived wealth of our society and the

value of other scholarships gave students false ideas of monies available.

A degree of subjective evaluation is unavoidable when involved with the Tanzanian students in the social setting. We were concerned for their happiness and realized distance from family and country could be debilitating. The project director and coordinator saw the students almost weekly either socially, academically, or incidentally; and the project director was in constant contact with the professors teaching the students. Maintaining contact and sharing information with Muhimbili in reports and on visits to Tanzania helped in evaluating the students fairly. Whatever the students felt inside, we have found them outwardly cheerful, involved, and accepting. Early in the project, we felt strongly that it was important for these women to visit their families once a year. Fortunately, the budget which had been approved had sufficient allowance for us to reallocate funds to the travel line and allow this annual visit. So after the end of summer school in late July each year, the students would go home to Tanzania for five to six weeks, returning a day or two before the beginning of the fall term. We determined that this was money well spent as the women always came back ready to work hard and complete their program. Monies were also reallocated in order to allow one student to go home after the sudden death of her father.

Early in the project, we felt strongly that it was important for these women to visit their families once a year.

General evaluation of performance has shown specific strengths and weaknesses in the students' academic abilities. Although each nurse-teacher has been unique unto herself, the whole School of Nursing at Dalhousie has been impressed with the motivation and dedication of these adult learners. The BScN graduates have all maintained a grade point average appropriate for acceptance to graduate school and invariably these students are in the top 25% of their classes. The only real academic weaknesses noted have been in statistical mathematics and chemistry. Fortunately, this weakness was identified early on and private tutors were provided for all students in both subjects. Although the private tuition was expensive, it was more cost-efficient and less humiliating than the potential alternative of requiring the students to repeat a term. For the Masters level students, above average editing and coaching with writing skills in thesis preparation was required and provided. All the students graduated on schedule. Much of this has been due to the quality of the nurse-teachers themselves and their interest in their learning, but some credit must be give to all project members and faculty who were ever present to support and mentor. Terminal evaluation (summative as far as the BScN is concerned) was similar to all other graduates of the BScN at Dalhousie.

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Developing Tanzania's BScN Curriculum

The implementation schedule for the first admission to MUCHS's BSc(N) class was delayed by one year, requiring some budget adjustments, cash flow changes, and postponement of the appointment of a Canadian nurse teacher. Also, delays in the scheduled first curriculum consultation resulted in the first students entering a program that turned out to be unsuitable to the needs and requirements of BScN students. Part way through that first academic year, the partners did the first revision of the curriculum and met with first year basic science faculty to lobby for changes. Some were implemented, some were not. Unfortunately for the first year class, any revision came too late and they experienced a disappointing 100% failure rate. Eventually agreement was reached that five out of the ten could repeat year one. Difficulties with the basic science courses in the first year of the curriculum continue to be a recurring theme in the program and the source of many failures and frustrations. The reasons are many — lack of resources (textbooks), insufficient resources (faculty) to offer a separate course for nursing, difficulty in basic science departments understanding what nursing students require and no will to change or take on the challenge of course revision — so nursing students are taught first year medical sciences. More extensive negotiations at the proposal writing stage of the project may have identified some of these potential problems so that the project plan could have addressed them more directly. It is not unusual for new baccalaureate programs in nursing to experience some problems, but cooperation and support could overcome concerns. The curriculum needs to be revised on an ongoing basis; it must not be viewed as a static document. Suggestions from the curriculum consultant were not readily received. The appreciation of nursing as a degree unit needs understanding by many. Without downsizing the academic rigor, expected program adjustments must be made to accept nursing as an educational partner. When joining classes with other health sciences are the only economical alternative, there is need for sensitivity by all departments involved in teaching and to all departments where students are involved.

Difficulties with the basic science courses in the first year of the curriculum continue to be a recurring theme in the program and the source of many failures and frustrations.

The curriculum needs to be revised on an ongoing basis.

As discussions on this program continued between the partners, the system of recruitment and admission became identified as a possible problem area. Potential applicants in the country were not aware that a baccalaureate program in nursing was available. Students who were being admitted to nursing were those who had chosen other health professions but failed to meet the necessary qualifications. To address this inadequacy, the project partners designed and printed brochures and posters for distribution throughout the country's schools and hospitals. Provision was made for admission of registered nurses in addition to high school leavers, in an attempt to admit a differently qualified but motivated group. This has not proved workable to date due to fact that RNs enter with FORM IV level only and therefore have no science base.

Provision of Equipment

Provision of learning resources to the Faculty of Nursing fell into the following categories:

- office equipment and supplies;
- teaching aids — academic and clinical;
- library — texts and journals;
- visual tools — films, videos, equipment;
- transport;
- human resources — teachers and consultants.

Although some equipment lists and expressed needs had to be refined, the purchase of equipment was on schedule and within the budget. Actual use of equipment provided continues to be limited. In the beginning, most of it could not be unpacked because the promised security measures had not been installed on the proposed "equipment room." In addition, the air conditioner needed to be installed so that the room could be temperature controlled. Once these tasks had been completed, the office equipment was unpacked and used — over a year after its arrival in Tanzania. Other equipment was partially unpacked and inspected. One of the difficulties in this kind of delay is that necessary bits of equipment were found to be either missing or misappropriated, but suppliers were not willing to assist because of the long elapsed time since its original purchase. In addition, there was no way of knowing at what point items went missing or became defective or were seconded elsewhere.

Actual use of equipment provided continues to be limited.

The whole area of equipment purchase was a very large part of the job of the project coordinator in the early years of the project. There was considerable pressure from the partners in Tanzania to provide the equipment as early as possible. Difficulties in correspondence and very sketchy knowledge of the resources available in Tanzania made intelligent choices hard. In the end, some equipment was purchased in Canada and provided with step-down transformers, but most of the equipment was purchased in the United Kingdom, using a forwarding company with experience in exporting to Africa. The assumption was that the experienced U. K. company would be more aware of the problems of the effects of tropical climate, etc., and of course the electrical specifications of the equipment did not need to be altered. In retrospect, perhaps the most efficient way of dealing with this component of the project would have been for the project coordinator to visit Tanzania, research the needs and resources at MMC and locally commercially, develop with the partners an appropriate list of equipment and preferred manufacturers, and then return to the U. K. where most of the electronic purchases could be negotiated. There is

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also the sense that it may have been more appropriate to wait until each piece of equipment was ready to be received, i.e. space arrangements completed, etc.

The library for nurses has been set up in the office used by the Canadian Visiting Nurse Teacher.

The library for nurses has been set up in the office used by the Canadian Visiting Nurse Teacher. There are many more books than there is space for shelving. Space for all resources is an ongoing concern. This will worsen as each set of graduates returns to duty and requires office space. The textbook situation is very dismal at MUCHS and library resources are just not available to support the BScN program. The nursing textbooks available in the main MUCHS library amount to only a few dozen volumes. Thus, the provision of this resource in the Faculty has been very well received and is well used, although it must be realized that it is definitely restricted to nursing texts.

Communication continues to be a problem for both partners.

Communication continues to be a problem for both partners. At Tanzania's request and against some project members' advice, a fax machine was incorporated into the budget and provided three years into the project. The telephone line in the Faculty of Nursing is still not available for installation of the fax machine so this piece of equipment remains in the packing box. We have depended to a large extent on the ability to send and receive faxes through CIDA, ASU or the Canadian High Commission, and depend on the Canadian Visiting Nurse Educator to be our courier. In fact, at the time of this writing, the whole telephone system at the Muhimbili Medical Centre has been out of operation for some time! As of February, 1993, a new internal system is being installed but as of February 20, 1993, was not yet functional.

Safe and efficient transport is recognized as a major concern in Tanzania.

Safe and efficient transport is recognized as a major concern in Tanzania. To this end, the original project budget was supplemented to allow for the purchase of two nine—passenger vehicles — one intended for general project use and transport of students to clinical placements in Dar and up country, and the other for use mainly by the Canadian Visiting Nurse Educator whose apartment was provided on the outskirts of the city. Public transport is neither reliable nor safe. The use of the vehicles provided has been a constant problem and the maintenance of such vehicles has been problematic. By 1993, one vehicle is considered a write-off due to inadequate maintenance, largely because of the very limited service available at MUCHS and the unreliability of commercial service.

The Canadian Faculty in Tanzania

The Canadian Visiting Nurse Educator assumed teaching duties in October, 1990. September was used for orientation in Tanzania and language training. She had also attended a one week orientation program at CIDA's Briefing Centre in Hull. Unfortunately, due to program delays, she has not been able to work in her area of expertise which is community nursing. She has made herself available as a resource in other teaching areas. She has attempted to promote research and instructional development of the new faculty, and act as a role model and faculty advisor for BSc(N) students in the program at MUCHS. Another significant component of her responsibilities has been to produce case studies, based directly on nursing experiences in Tanzania, which will be produced in a case study book for use in Tanzania. In most, she guided students and nurse teachers in the writing of these cases. It is hoped that this will be a very culturally-appropriate learning resource in a country which relies almost exclusively on North American and European publications.

Another significant component of her responsibilities has been to produce case studies, based directly on nursing experiences in Tanzania.

Site Visits

Annual visits back and forth between the two institutions have been essential in the implementation of project activities. Due to the communication difficulties expressed already, much of the activity and work gets done around the annual visits. After the first year, the Dalhousie project director visited Tanzania and MUCHS once during each year. In addition the Director of the School of Nursing at Dalhousie visited MUCHS and, in 1990, the project coordinator accompanied the project director. The Tanzanian project partner who is also the Dean, Faculty of Nursing, visited Dalhousie twice. During her second visit she was accompanied by a physician and professor who was at that time Director General of MMC. Each visit promoted communication and understanding between the partners and must continue to be considered a very essential part of project work. The original project plan did not include the visit by the project coordinator; however, it has been extremely helpful in the understanding of the cultural, political and economical context in which the partner institution operates and allows the project coordinator to be more effective and sensitive. Need for project site visits have been one lesson learned the hard way. No preliminary visit was made at the proposal stage, no coordinator's visit had been planned, and no site visit was made when the directorship changed to investigate the status of the project before confirming the new directorship.

The visit by the project coordinator has been extremely helpful in the understanding of the cultural, political and economical context in which the partner institution operates and allows the project coordinator to be more effective and sensitive.

Conclusions

The benefits to Dalhousie University from involvement in this linkage project have been many. Canadian nurses have gained a deeper understanding of health needs and health services beyond provincial boundaries — through exposure to their Tanzanian colleagues, thereby contributing to the School's goal of a world view of nursing. Professors, students and staff at Dalhousie University have gained a new knowledge of, and sensitivity to, cultural values which may facilitate meeting the needs of increasing numbers of multicultural clients/patients in Nova Scotia and Canada. The exchange of visits, presentations by visitors at both institutions and the sharing of social events has led to warm feelings of friendship and respect. Interest in the project among faculty has increased, to a large extent due to opportunities to teach the Tanzanian nurse teachers and to meet the Tanzanian project director during her visits. A visible sign of the nursing community's desire to become involved and help has been their contributions of usable textbooks for MUCHS's Faculty of Nursing library. Dalhousie's nursing students have been excited to hear about nursing in such a distant place and to discuss cultural differences. Some, however, have been a little awed by these women who have left so much at home to come here for a degree. Additionally, more students are requesting an elective in Transcultural Nursing and more faculty are including other cultural values in their teaching. One Canadian nursing student, studying at Dalhousie, spent a successful six week placement at MMC. This was funded by the International Health Exchange Program, but the plans were initiated when the Tanzanian project director met with the student during a visit to Dalhousie.

Dalhousie's nursing students have been excited to hear about nursing in such a distant place and to discuss cultural differences.

As the project nears the end, no plans have been made regarding continuation of the linkage in a formal way. A three-way evaluation is underway: a) an equipment audit has been completed; b) an evaluation team consisting of an independent consultant and representatives of each partner institution have interviewed many individuals in both institutions and countries and are preparing their report; and c) an internal evaluation by the two partners is underway. A final report to CIDA will contain all three components. Only after the evaluation is completed will Dalhousie University, School of Nursing and MUCHS, Faculty of Nursing look to the future. CIDA is undergoing major organizational changes which may change the nature of these linkage projects. The directorship of the School of Nursing at Dalhousie is changing. One thing is certain though — those most closely involved with the project — whether students, staff, faculty — at Dalhousie or at MUCHS — have gained new knowledge, both academic and cultural, and personally benefited from it. The lessons learned are valuable, not only for future planning, but in helping each one of us look at our contributions, downfalls and avenues of change.

Only after the evaluation is completed will Dalhousie University, School of Nursing and MUCHS, Faculty of Nursing look to the future.

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SUPPORTING SOCIAL WORK IN GUYANA

by David P. Williams

Project Profile

Discussions between the University of Guyana (U.G.) and Dalhousie began in 1985, leading to a project with several subsystems. Each subsystem can be expressed as having one of the following primary objectives:

Discussions between the University of Guyana (U.G.) and Dalhousie began in 1985, leading to a project with several subsystems.

- to create a capability at U.G. to mount a bachelor level degree in social work (B.S.W.);
- to institutionalize a Women's Studies Unit in U.G. and to integrate a course on Women in Development within the social work degree (B.S.W.);
- to train supervisors within the social work agencies of Guyana so they can supervise the social work students in training;
- to provide books and journals as a support to the studies in social work and community development;
- to provide administrative equipment in support of a school of social work and the women's studies unit.

Over the life of the whole project, Dalhousie University contributed some \$275 thousand, the University of Guyana expended some \$150 thousand and CIDA expended some \$750 thousand.

Between April 1987 and 1993 the partnership produced the following results:

- the graduation of 15 Bachelor of Social Work students and 6 students with Master's Degrees in Social Work;
- an international conference was held in Georgetown on building the curriculum content of course offerings in women in development. Two further workshops on this subject have been held in Guyana especially to involve

rural women and urban women in specifying the University's role in women's studies;

- 40 social work agency supervisors have been trained in supervision, with special emphasis on the supervisor's role as a teacher;
- books, journals and videotapes have been delivered to the value of \$31,000, and the University of Guyana has been furnished with two computers (one dedicated to the women's unit), a photocopier, a mimeograph machine, a camcorder and VCR, a fax machine, a project vehicle, and paper (materials and supplies valued at \$2,000);
- the faculty and students of the University have locally produced books on subjects including "Family Violence" and "Social Welfare in Guyana". Further local publishing in the social welfare field is expected to be produced by project participants.

Project Process

The main element of Dalhousie's contribution was the 'training of trainers'. As part of that process, Dalhousie University undertook to provide six social workers from U.G. with a programme for Master of Social Work. The persons selected by the University of Guyana for this education were two males (already on faculty) and four females (recruited and appointed to the faculty as a part of the project). While these six faculty were at Dalhousie, the Maritime School of Social Work furnished teachers for five out of the ten course units which were added to upgrade the pre-existing U.G. social work diploma program to the new B.S.W. Degree. Two of these units were taught in Guyana and three units were delivered in Halifax at Dalhousie; the degree itself was granted by the University of Guyana. Guyanese sociologists delivered the other five course units.

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To help establish the Women's Studies Unit in U.G., a conference was initially held on curriculum, at Georgetown. Some sixty women from thirteen nations participated, including from all districts within Guyana (rural and urban). Papers delivered at that conference are in the process of publication, covering issues in the legal, economic, governmental and social spheres. Subsequently forty social work supervisors were provided a fortnight's intensive training at two workshops in Guyana, a year apart. The graduates of these workshops were given training in participative and practical aspects of community development (with an emphasis on empowerment of consumers as well as communication) and in the development of therapeutic skills for use in all aspects of social work (including work at the individual and family levels of practice). The training also emphasized skills in the reform of the

organizations which constitute the workplace of social workers and the place of succor of consumers of social welfare benefits. The social agency supervisors, many of whom had no previous training in social thought and action, have now been exposed to a different conception of social welfare. A large number now in the B.S.W. degree program (today run entirely by the Guyanese graduates of the Dalhousie U.G. degree programme) came to social work as an outcome of their participation in these supervisory workshops.

From Training to Research

In 1991 the author developed a research project in Guyana, in association with Patrice Lafleur (an MSW graduate of the project) and with the Institute of Development Studies at the University of Guyana.

The research project, now supported by IDRC, aims to explore the value of existing industrial social welfare benefits to the workforce and to their communities before privatization with a view to furnishing Government, firms, trade unions and community organizations with data as a guide to the process of privatization. The project aims also to continue to monitor the costs and benefits following privatization.

Some Lessons from the Guyana Experience

One can conceive of projects being embedded in either a "thin" development strategy or a "thick" development strategy. A thin strategy posits a single freestanding project which may be complex internally but has no particular relation to any other project in the host country. A project in a thin strategy generates or spins off no companion projects. In contrast, a thick strategy occurs when a project is conceived as a part of a multicomponent system and, in the course of its life, deliberately generates companion projects which are mutually reinforcing. The reinforcement can occur when the companion projects utilize the team of persons built up in the original project and/or build upon networks that have been developed, and/or extend the use of technology that may have been transferred and/or directly attack barriers encountered in the original project. Companion projects may extend "longitudinally" the goals of the original project and/or may extend "horizontally" in pursuit of complementary goals.

Throughout the administration of the social work and women in development (WID) project, the team looked for opportunities to extend the effect of the project to the disadvantaged populations. Two opportunities appeared quite readily, albeit CIDA funding was not available. The first was the author's chance to become slightly involved with a UN project to rehabilitate the neighborhood of Albouystown, a rapidly deteriorating slum in Georgetown. One of the MSW trained faculty (Errol Christopher) had undertaken to work with

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the UN expert (Mr. Lennox Marks, also a Canadian) to create a unit of street youth workers. The chance presented itself to write a proposal to the UNDP to underwrite the training of a neighborhood indigenous worker, at a two week school for street youth workers in Lima, Peru. The proposal was granted, allowing Dalhousie's MSW graduate from U.G. to provide further training to the woman selected for the Lima experience upon her return, building on the base of skills she acquired in Peru. This was a demonstration of the extension of social work in its incarnation as community development.

A second opportunity was offered when a BSW student in Canada (Greta Lammy) sought special experience in a Canadian Home for the Aged, (the Northwood Centre Complex in Halifax) and then returned to her job in Guyana as "matron" of two homes for the aged. The project students of a later educational cohort were assigned the task of surveying all the homes of the aged in Guyana and creating a description of the quality and quantity of care offered the aged. Using the information gained from the work of the students, and in connection with Sybil Patterson of the social work/WID project team and Greta Lammy, the author sought funds physically to rehabilitate the nursing homes and to develop a standard of personal care that would establish what could be done in Guyana. The first task was to write a proposal to the Canadian High Commission for the use of Canada Fund monies to carry out the architectural rehabilitation of the homes. This application was successful and the sum of \$22,000 Cdn. was committed to the physical restoration of the buildings. That rehabilitation was promptly carried out by Ms. Lammy and her committee of oversight. The amount of funding may seem small to note in this paper — but it was significant. Large amounts do not necessarily result in significant projects.

Further efforts to raise funds in Canada were then embarked on — as contributions to nutritional, medical, psychological, and activity needs of the residents of these homes. The basic notion was that, once standards of care of the aged had been raised to a higher level (recognizing the Guyanese economic situation) two things might happen. The first objective was to capture, as residents, parents of persons who had emigrated and would be prepared to pay a substantial amount (about \$200 Cdn. per month), the surplus of which would support the 80% of residents who had zero resources. The second goal was that those homes for the aged that ran on a profit basis (approximately 10 homes) would then have to raise their standards of personal care in order to compete. To that end, the Canadian director organized a group of aged persons in Halifax to be a support organization for the aged in Guyana. Their most successful achievement to date was to obtain the commitment of the Northwood Centre (Halifax) to enter into a "twinning" relationship with the home Dalhousie and U.G. are rehabilitating in Guyana. This resulted in raising some \$20,000 to support staff services in medicine and social work, an essential part of a personal care program for the aged. The

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Their most successful achievement to date was to obtain the commitment of the Northwood Centre (Halifax) to enter into a "twinning" relationship with the home Dalhousie and U.G. are rehabilitating in Guyana.

Dalhousie-U.G. group also sponsored an American nurse to spend a month training the personnel of the homes in the physical and medical care of the aged. These activities served as examples (involving the social workers trained on the project) in what can be done in changing the delivery of services to oppressed groups.

The IDRC Project as a Mutually Supporting Project Making a System of Projects:

Since the imposition of IMF austerity measures in 1989, life in Guyana has become very hard to piece together. 1989 was the first year that students began to return to Guyana from their Canadian training. They were faced with a six fold rise in prices from those they had lived with before. At the same time a wage freeze had been imposed upon the government service in which the Dalhousie/U.G. graduates were employed. Although the freeze was later ameliorated by 6% and 12% raises, the resulting salary was insufficient (in itself) for survival. (University lecturers are paid the equivalent of about \$250-350 Cdn., not a living wage in Guyana). Between 1989 to 1991 only two of the twenty-two graduates emigrated from Guyana.

If the critical mass of social workers trained by the project were to be preserved, some incentive to stay in Guyana and work to change the social welfare delivery system had to be devised. The issue was not a lack of commitment to Guyana and its peoples by the graduates of the program, the issue was the absence of the wherewithal to feed their families. Here we see clearly that the absence of a mutually supportive parallel project would have nullified the gains obtained through the financing of the original project. It is fortuitous that the Canadian Director was successful, in December of 1991, in obtaining a grant through the International Development Research Centre to study the changes in Industrial Social Welfare Benefits as the Bauxite and Sugar industries are put on the block for privatization. The requisite staff with basic training in social research existed among our graduates in the social work programme. The IDRC grant provided the opportunity to pay a living wage to the majority of our graduates for a 60% work week. This meant Dalhousie-U.G. have been able to preserve in Guyana a critical mass of trained social workers, who use the remainder of their time to continue to penetrate the social welfare field with their message of empowerment. Their work on the Industrial Social Welfare Benefit Research Project itself is the kind of action policy research which is at the heart of the knowledge creation that social workers do, and at the center of the issues that have been taken up by the newly elected Government of Guyana, as the author has been told by more than one member of the Guyanese Cabinet.

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Looking Ahead

Were CIDA (or some other funding body) to contribute to a system of mutually supportive projects in Guyana, to follow upon the Social Work/WID project, a series of such projects have been suggested by the Guyanese team as further extensions of their relationship with Dalhousie University. These include:

- a project in distance education, utilizing equipment donated from Europe. The project would produce training materials for social workers and women's groups in rural and interior areas;
- a project to put together social workers and the Amerindian Research unit of the University of Guyana to work with Amerindian women in forest settlements to aid them to cope with the penetration of the forest by road building crews, mining and the cash economy. In the process Amerindian social workers would be trained;
- a project to develop training and small business start-ups for families and persons dependent upon the very meager resources of the Guyanese welfare system;
- a project to support the establishment of transition houses, anti-violence programmes and feminist counseling in several communities;
- a project to establish community alternatives to imprisonment for juvenile offenders.

Such a system of projects would utilize the knowledge of values of the social workers trained in Canada and Guyana, who now represent a critical mass of professionals with the zeal to transform a welfare system gutted, in no small part, by the austerities imposed by the international lending organizations.

Conclusion

Should All Projects Expire Without Progeny?

International aid projects are not meant to go on forever. The project may create an institution in the host country which is destined to live a long and productive life, but the transnational aid project itself is expected to expire on time and at or under budget.

The notion that a project might return to life or find a new life or spawn (spin off) new life is viewed askance as an unquiet grave might be. In fact there exists a body of literature on the subject of

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"institutional goal displacement", whose origins may be found in the study of the March of Dimes organization in which the M.O.D. turned to the eradication of birth defects once the original goal of eliminating polio had been achieved. This literature notes that an institution, once having been funded, staffed, and set in motion (particularly if successful) tends to defy entropy.

Factors which are necessary (though not sufficient) for successful projects are made obvious through experience. They consist of human initiative and cross cultural cooperation combined with adequate resources. That is, the absence of human initiative will doom a project to failure as will an absence of cooperation. Given the adverse conditions to be encountered in the third world, the amount of human initiative required for a successful project can be substantial.

A graduate student with this project said, in an evaluation interview (speaking of the Guyanese counterpart project director - Dr. Ken Danns of the University of Guyana):

"I think the project director is a very strong person who is very action oriented... for instance... I was going up to Dalhousie, I had one month in which to do a number of things... I had to get employed by the University of Guyana... so he had to get all my letters, my application, he had to get the Vice Chancellor to employ me, he had to send my letters to the High Commission, he had to get to my [old] place of employment for them to release me. So all of that was done in a matter of three weeks; yes, it was really at break neck speed."

I argue that officers in development agencies (such as CIDA) can name those current projects that are delivering their promised products on time — at or under budget. A few discrete inquiries can readily provide some notion of the quality of the project being delivered.

If the persons, or teams of persons, who display the requisite initiative and cooperation and have established a track record of successful project implementation, can be identified then the ability to predict further success is likely to be markedly increased. These persons, as soon as they have clearly emerged, should play a role in developing further relevant projects in the country in which they are working. Spin-off projects carried out by teams which are presently successful are likely to generate further successes.

But, funding agencies may say there are many criteria involved in selecting a project for funding and probability of success is only one of these. First there are the priorities of the host country government; priorities which may not fall within the area of expertise of the personnel of the initially successful project. Secondly, there is the distribution of projects to the Canadian partners on a fair basis both

I argue that officers in development agencies (such as CIDA) can name those current projects that are delivering their promised products on time — at or under budget. A few discrete inquiries can readily provide some notion of the quality of the project being delivered.

regionally and sectorially. Third, there are the priorities of the funding agency itself and changes in these over time. As well, there are changes in the priorities of the Canadian partner institution from which the initial project emerged.

Yes, all these are realistic considerations, and the quite proper politics which these issues reveal will certainly assert themselves in the funding agency's decisions. I argue here, however, for the incorporation in the project generation and approval process of a regularized means to include individual track records and specific human initiative factors as crucial issues. The importance of recognizing human factors reaches to the core efficiency of projects in general.

Funding agencies need not surrender their flexibility entirely to the "thick model" of development, but, if sustainable development is to be a serious goal — the reinforcement of success should, I would argue, be at the core of projects and programme planning.

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PREPARING FOR DISASTERS

by John Benoit and Ken Eyre

Introduction

This paper, at first glance, is fairly different from the others in this section of the book. Unlike social work in Guyana or nursing in Tanzania, this paper is not about what Dalhousie has done in the Third World nation. Rather this paper explores what could be done in a Third World nation. Like Fred Wein's chapter, "The University and the Development of Mi'kmaq Communities", this paper draws upon rural Nova Scotian experiences, in this chapter, the volunteer fire service. This chapter will proceed to:

1. describe certain aspects of the Nova Scotia volunteer fire service;
2. apply this description to issues raised for disaster management education;
3. extend disaster management education to the Third World.

The Volunteer Fire Service

Halifax is a post industrial metropolis. Most Haligonians process information working for government, defense, academia or, most recently, "high tech" industry. Seven universities within the metropolitan area create a potential for economic development within a hinterland region which suffers high unemployment. This hinterland engages in primary resource extraction (fishing, farming, forestry). A somewhat analogous American region is the research triangle of Raleigh-Durham-Chapel Hill extending itself outward from a hitherto economically underdeveloped "Tobacco Road" known as North Carolina.

The apparent lack of development within rural Nova Scotia masks a series of strengths. For example, the province contains over 8,000 volunteer firefighters who are members of over 300 volunteer fire departments, (Benoit, 1989). These departments respond to about 18,000 calls each year, saving the province about 30 million dollars in the process (Rees, 1991). More significantly, these same departments are beginning to diversify to offer other essential services such as emergency medical response and hazardous materials incident response.

The apparent lack of development within rural Nova Scotia masks a series of strengths.

The typical rural volunteer fire department contains two or three emergency vehicles and about 40 volunteers. This resource is sufficient for most residential or grass fires (the most likely types of fire suppression calls). However, a more serious fire (a barn fire or a commercial fire) will require resources which exceed the capacity of the community. Any emergency which requires resources exceeding the capacity of the community is, by some definitions, a disaster (Auf der Heide, 1989). Interestingly, the volunteer firefighters themselves would define this same emergency as routine. The responding fire department would merely call the adjacent community, asking for additional fire apparatus and personnel. In turn, that adjacent community would respond and ask for backup protection for their own community from the next adjacent community. The result is a form of inter-community cooperation or 'mutual aid'.

Amazingly, this form of cooperation is rarely formalized. Few legal agreements are written among these 300 fire departments. Indeed, the fear is that liability insurance might be compromised if damages arise outside the jurisdiction of the fire department, responding to a legal agreement. Ironically, few fire chiefs worry about this problem. In effect, enlightened self-interest maintains the informal social organization. Fire departments are afraid not to respond lest they themselves have a fire, requiring aid from elsewhere. Unfortunately, this cooperation rarely extends beyond fire departments. The disaster literature is replete with examples of "turf wars" among different types of emergency agencies. This organizational vulnerability is addressed in this paper.

Disaster Management in the First World

Thompson (1967) used the expression 'synthetic organizations' to describe the purely ad hoc management groups that traditionally emerged with the advent of a disaster. He observed that these groups were inherently inefficient because they were obliged to create their own hierarchy, infrastructure, procedures and relationships at the same time as they were trying to conduct operations. Not only are these organizations beset with internal tensions, but also outside agencies find them extremely difficult to cooperate with because working linkages do not exist. Needless to say, the experience of working in an inefficient organization when the operational task involves life, property and the environment can be stressful.

In order to reduce the stress and hence the likelihood of maladaptive crisis leadership behaviour, communities began to undertake emergency planning for possible future disasters. Creating a planned organization serves to eliminate beforehand many of the internal tasks true synthetic organizations must address. However, if the content of the plan is not known to all potential members of the organization, improvements in

Creating a planned organization serves to eliminate beforehand many of the internal tasks true synthetic organizations must address. However, if the content of the plan is not known to all potential members of the organization, improvements in efficiency may be only marginal.

efficiency may be only marginal. A "synthetic plan" is not a solution to the inherent problems of a synthetic organization.

Disasters are clearly stressful events, not least in anticipation by potential disaster managers such as fire chiefs, town managers, police chiefs and mayors. Compounding the stress of responding to the event itself, is the awareness of the inevitable aftermath, a board of inquiry and a possible aftermath of litigation. These stresses can aggravate turf wars. Convergence of agencies with overlapping jurisdictions is likely, particularly in a federal state. In any case, the legitimate power of a mayor may be undermined by the expert power of a provincial or federal emergency measures official. Such potential problems suggest the advantage of planning to reduce jurisdictional conflict and group training to enhance role familiarity and coordination.

The logic of emergency preparedness suggests that every community develop an all-hazards emergency plan, including both municipal officials and those responding to a disaster who are not employed by the municipality. Examples of the former include: the mayor, the municipal emergency measures coordinator, the police chief, the public works manager. Examples of the latter include: the hospital emergency medical director, the media, safety representatives of local industry and the provincial emergency measures organization. Once the draft plan is developed it must be tested by various forms of emergency exercise. Gradations of exercises not only test the plan, but also provide practice for the team of emergency responders. They can help to reduce the likelihood of "turf wars" at an actual disaster.

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In order to illustrate the value of team practice of a community emergency plan, consider the following illustration:

At 5:03 p.m. in Petrolville (community of 8,000 population) a tornado strikes the Tar Pit Trailer Court demolishing three trailers leaving twelve people injured, and five dead (two missing). The tornado skips in a north easterly direction about 800 meters descending on "Mom's Bar and Grill." One tractor trailer and one flat bed truck are overturned, spilling bottles of propane from the tractor trailer and caustic soda from the other. The fat fryer in "Mom's" spills during the tornado and ignites starting a structural fire.

The town manager of Petrolville is alerted by the police chief about the tornado at the Tar Pit Trailer Court. She contacts the mayor who, on advice, declares a state of local emergency. Using a fan-out procedure, members of the Emergency Operations Centre (EOC) are contacted. On arrival at the EOC, the town manager is told about the hazardous materials incident by the fire chief. The town manager quickly recognizes the organizational structure which will arise.

EOC

Emergency
Manager 1:
(Tar Pit Trailer Court)
- Probably ambulance person

Emergency Site
Manager 2:
(Mom's Bar and Grill)
- Fire Ground Commander

Mayor

Emergency Site 3:
(Mom's Bar and Grill - if
evacuation is required)
- Senior Police Officer

Emergency Site 4:
(far away from Mom's Bar and Grill
- if evacuation is required)
- Relocation Centre
- Social Services Director

As you can see, how the organization evolves depends on the nature of the incident and the nature of the decisions. Inevitably the site managers will be dealing with the tactics of deployment of emergency responders on the sites. The Emergency Operations Centre must anticipate the need for resources and ration them. (Rationing is inevitable because the peak demand for resources exceeds the available supply, particularly in small towns). Major policy decisions, however, are made by a committee of council. (Some of these decisions usually involve a clash of values, for example the decision to evacuate faced with the threat of an hazardous material container rupture.)¹

An effective disaster response organization requires significant interaction among civilian responders such as the town manager and even the lawyer retained by the municipality. Even emergency responders must unlearn many standard operating procedures once the scale of the incident exceeds their normal response.

Emergency training progresses from low cost, small numbers of personnel, to high cost community "live" exercises.

Emergency training progresses from low cost, small numbers of personnel, to high cost community "live" exercises. Typically municipal management responders are presented with a tabletop exercise where the essential features of a disaster (flood, hazardous materials leak, etc.) are presented on a map. Information describing the progress of the disaster is presented in real time. Depending on the quality of the manager's decisions and depending on their execution, so the informer-judges alter the nature of the disaster. As the exercise develops further, key decisions or requests for resources can be sent by telephone or radio to the emergency operations centre and a realistic level of complexity of live exercise can be conducted. Often high school students are asked to play victims, emergency vehicles such as heavy equipment, ambulances, pumpers and squad cars converge on a disaster site. Here the emergency site manager must make quick decisions, relaying

¹ Evacuation is a non-routine decision. The cost of evacuation is usually high. Not only is business lost during working hours but lives are at risk during hospital and nursing home evacuation.

information to the emergency operations centre. Similarly many personnel, councilors, department heads, reporters will converge on the emergency operations centre. The exercise may be conducted for hours or even days as aspects of recovery (evacuation to temporary relocation centres for example) are practiced.

What if there is no disaster? Is all this effort wasted? On the contrary, the training to role play for an emergency may very well facilitate the day to day coordination needed within municipalities for routine and developmental activities. As municipalities learn "how to do more with less," their managers learn how to influence the behaviour of others, not control that behaviour. The liaison skills which arise from training to deal with disasters are transferable to other kinds of work as well. Dartmouth, Nova Scotia (population 75,000), is in the process of training its personnel for emergency preparedness. Some of this training has assisted the same officials to engage in a strategic planning process. Dieppe, New Brunswick (population 15,000), has participated in emergency preparedness training for over six years now. This training, some local municipal officials maintain, has greatly assisted these same officials in carrying out the administrative and political duties associated with the running of the municipality. Bedford, Nova Scotia (population 9,000), has also noticed the positive effect of disaster training, including the training provided to volunteers who do not work for the town.² In 1990, Bedford created a volunteer emergency measures organization, analogous to the town's volunteer fire department (Eyre, 1990). The fire department meets routine emergencies; the EMO exists to help manage a major disaster should one ever occur.

What if there is no disaster? Is all this effort wasted? On the contrary, the training to role play for an emergency may very well facilitate the day to day coordination needed within municipalities for routine and developmental activities.

Big municipalities have sufficiently large bureaucracies within their emergency services organizations to be able to meet staff and field requirements concurrently. Smaller communities do not have this luxury. The Bedford solution of using volunteers in the EMO support role frees emergency response professionals for technical or supervisory roles at the disaster site.

A strength of disaster preparedness training is that it is fairly non-threatening (unlike a disaster itself or a more routine and operational training programme). Managing for the hypothetical does not involve the vested interests inherent in day to day management. Similarly, it allows for local volunteer involvement, necessary to reduce cost and necessary to empower the local officials who are likely to be the only staff responders within hours of a sudden disaster.

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² All of these communities will require more case study. Recent provincial initiatives leading toward the amalgamation of each of these communities with larger adjacent municipalities may provide an interesting challenge to their emergency training.

Disaster Management in the Third World

Given that emergency preparedness training has been found to confer a variety of benefits in rural and small town Atlantic Canada, we can ask whether some of these ideas might be transferable to countries in the Third World or Eastern Europe. Let us consider why this might be the case.

First of all, despite urbanization, many developing nations are primarily rural. The livelihood of the citizens depends upon a harvest or a catch. Moreover population pressure are increasingly leading to the use of the most hazardous fertile lands. For example, despite the regular flooding of Bangladesh, a process which provides replenishment to the soil, people still risk their lives in vulnerable areas.³ Similarly, in the Pacific Rim, many farmers till fields on the slopes of volcanoes, the ash from which fertilizes the soil. People place themselves "in harm's way" because the alternative may be starvation.

Second, safety standards and their enforcement tend to be lax. Compliance with building codes, especially if they are set at European or North American standards, can greatly increase the cost of any structure. As a result, fires, industrial accidents, and transportation accidents are more likely and more costly in terms of human life.

Third, the municipal infrastructure which allows rapid response to disasters is frequently weak. This infrastructure includes the responding agencies such as emergency medical services, fire services, police and public works. When the municipal infrastructure is present, then senior municipal officials control rather than coordinate (Kiggundu, 1989). This exacerbates "turf wars".

The response to disaster is more complex in many developing nations.

Fourth, the response to disaster is more complex in many developing nations. The convergence phenomenon attracts not only local and national agencies to a disaster scene, it also attracts international agencies as well. Often the agency managers will be unfamiliar with the local scene and often unable to speak the language. Conversely, these same managers will be bearers of scarce resources, particularly money.

Fifth, and perhaps most significant, poverty itself encourages the establishment and maintenance of multiple antagonistic military regimes. Many third world dictators have learned to govern by resort to violence. This produces displaced population, (often minorities which arose from the arbitrary boundaries which are artifacts of colonialism).

³ The practice of purdah leads to many of the deaths. Although meteorological forecasting provides reasonable warning for evacuation to high ground, compliance with purdah (seclusion of women) is inconsistent with evacuation. Many citizens remain at home and drown. Perhaps a "floating purdah" is the solution.

These people become refugees, divorced from an agrarian livelihood to become wards of international relief agencies.

Despite these vulnerabilities, many Third World nations have several capacities which can reduce the consequences of these vulnerabilities. First of all, the institution of the family, particularly the extended family provides resources to victims who are relatives. Many victims of disasters occurring in Islamic nations have benefited from the revenue provided by a cousin working in the oil rich Gulf nations. Second, many newly appointed public servants will not have to unlearn the stultifying behaviour which arises in our hierarchy, maladaptive to the quick decision-making required, during a period of disaster response and recovery.

Third, the absence of an emergency infrastructure (fire, public works) means that developing a coordinated disaster response and recovery may actually be easier. There are fewer vested interests indoctrinated to single agency standard operating procedures. We do not wish to overemphasize this advantage. After all, the absence of infrastructure has already been shown to exacerbate disasters above.

Does any evidence support the utility of a coordinated multi-agency response? The recent comparative case studies arising from the International Relief/Development Project are informative, (Anderson and Woodrow, 1989). For example, recovery from the Joyabaj Earthquake in Guatemala in 1976 was greatly enhanced by the coordination of several Save the Children Funds from Austria, Canada, Denmark, Norway, Sweden, the United Kingdom and the United States (Miculax and Schramm, 1989). These seven separate agencies became Alianza in Guatemala. Their cooperation led to anti-seismic housing which would not have been possible had each agency acted alone. Initially the rebuilding program suffered several setbacks in its scheduling. For example, the labour intensive construction phase competed with the labour intensive planting season. However, after involving an anthropologist and after the addition of local management staff, the project's goals were reached. Included among these goals was the development of a network of local community organizations which spanned beyond housing construction to include health care delivery, education and small business development.

Perhaps the best evidence to support the value of a coordinated emergency relief agency approach arises from the Santo Domingo Project in the Philippines (Anderson and Woodrow, 1989). In 1984, the Mayon Volcano erupted affecting Santo Domingo, a densely populated rural area. The eruption happened in the midst of a rural assistance project sponsored by the International Institute of Rural Reconstruction (IIRR). The project had just started two months before the eruption. Fortunately, the IIRR team had developed a good reputation with the already existing Santo Domingo Municipal Disaster Coordinating Committee (MDCC). As a result, the IIRR team was

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able to convince the MDCC "to shift people among evacuation centres so that they were with other families from their village cooperatives" (Anderson, 1989: p.247). During the three month stay in the evacuation centre, each village cooperative learned to problem-solve by identifying its own needs and analyzing the causes of the problem. This suggested solutions which ranged from the construction of footpaths linking villages to establishing a rice mill.

However, the greatest benefit of IIRR development work arose in 1987, three years later in response to Typhoon Sitang. Three hundred kilometre per hour winds destroyed 1/3 of all the local housing. Nevertheless, the social organization of the village cooperatives permitted rebuilding to proceed with the minimum dislocation. Each cooperative rationed building materials based on need with high satisfaction expressed by citizens. The moral of the story is:

Disaster in the presence of coordinated effort leads to development of social organization which makes it easier to cope with subsequent disaster.

This form of social organization is a sustainable response only if local networks can socialize their member organizations and their individuals toward the values and practices associated with coordination rather than control. This implies the very form of training for emergency response which we have already presented.

Coordination, rather than control, has hitherto been difficult to achieve in Third World municipalities.

Coordination, rather than control, has hitherto been difficult to achieve in Third World municipalities. In the Third World, municipal organizations tend to lack strategic direction (Kiggundu, 1989). Typically, senior municipal officials are so concerned with operational matters that they do not have time for strategic thinking. Typically these senior officials argue that their own subordinates lack the training to allow for effective delegation. Emergency management training not only facilitates delegation but it also can enhance linkages between senior municipal officials and junior middle management officials on one hand, and linkages between junior management officials and operations workers on the other.

It may also be useful to compare the utility of disaster management education with David Williams' discussion of "thick" versus "thin" development strategies, introduced in his chapter, "Social Work in Guyana". His argument is that mutually reinforcing development projects are more likely to achieve success compared with a single isolated project, the "thin" development strategy. In many ways this paper supports this position by considering development after the fact. This paper argues that disasters undermine already "thin" development in the Third World. Thus disaster preparedness reduces the negative consequences on development and encourages the inter-organizational coordination necessary for development.

Where do we go from here? In this United Nations Decade for Natural Disaster Reduction, the recognition of disaster management and education curricula as routine elements of foreign aid projects — including linkage projects between universities — is to be recommended. This paper does not presume to make any sweeping generalizations — but rather the authors hope that these ideas may encourage those working on international partnership projects to pursue this theme further.

The recognition of disaster management and education curricula as routine elements of foreign aid projects is to be recommended.

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THE SOUTH AFRICAN STUDENT EDUCATION PROJECT¹

by Jim Hall, Patricia Rodee, and Isaac Abraham

Outline

This project is designed to provide graduate education for non-white South Africans at Dalhousie University. Until now it has acted as a local facilitating group working in association with the national Southern African Educational Trust Fund, (SAETF). SAETF was responsible for student selection in South African student orientation, all travel and installation costs and half of student stipends for living expenses, tuition and books. The South African Student Education Project (SASEP) has arranged for the placement of students in departments at Dalhousie University, provided counseling and found half of student stipends. The project is based at the Lester Pearson Institute of International Development (LPI), which provides financial and administrative support, and is coordinated by a campus-wide group. The local component of funding is provided by a number of groups and individuals within the university and the local community.

This project is designed to provide graduate education for non-white South Africans at Dalhousie University.

Project Identification

The project was first considered in the mid 1980s, when Canada was becoming increasingly involved with Commonwealth and other international activities designed to encourage the replacement of the apartheid system in South Africa by representative government. It seemed very appropriate to play a part in preparing, if even in a small way, the majority, disadvantaged non-white part of the South African population for its future role in society. As a result, a proposal was drawn up by a group representing the universities in the Halifax area, together with the Nova Scotia Agricultural College, located near Truro. The proposal involved the establishment of a program which would

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¹ **Acknowledgments:** The authors would like to acknowledge the support and friendship of their colleagues on the Steering Committee of SASEP. They also appreciate very much the close relationships they have enjoyed with the South African students in the program. The Pearson Institute, and its Executive Director, Tony Tillett, has always generously provided cheerful encouragement and practical support.

support the placement of 20-30 students at any one time in the Halifax area.

While this proposal was being circulated for discussion, SAETF was established by the Government of Canada as part of a package of initiatives regarding South Africa. The SAETF, with financial support from Treasury Board through CIDA, selected students in South Africa and sought the help of university-based groups across Canada in placing students in graduate programs. The SAETF covered all student travel and installation costs, and agreed to share equally the cost supporting the students' living, tuition and book expenses, estimated at Can. \$15,000 per year, with these local groups. It was recognized early that many students would require a qualifying year before entering a graduate program in Canada; the SAETF agreed to provide the full support for that year when it was deemed to be necessary.

Beneficiaries

The experience of living in and observing Canadian society is considered as important as the academic training provided.

Those who benefit from the program are young women and men from the African, Coloured and Indian communities of South Africa. Those placed at Dalhousie have completed first degrees and have been ready for (or within reach of) graduate education, particularly at the master's level. The 1-3 years spent in Canada have offered the double benefit of a graduate degree, with the training and experience involved, and the experience of living in and observing Canadian society. The latter has provided first hand experience of Canada's attempts to make a multi-racial society. The experience is considered as important as the academic training provided, as reports have suggested that the various racial groups in South Africa have been very isolated and have had little exposure to other societies.

History of Project Operation

The Inter-University group decided to become of the partner groups of the SAETF and, in late 1987, received the files for a first group of applicants from South Africa. Two students, both men, were selected for entry in September 1988. One student was to enter directly a one year masters program in History at Saint Mary's University and the other to enter a qualifying year in the Mathematics Department at Dalhousie University. Both students arrived in late summer of 1988 and entered their planned programs. The Saint Mary's student successfully completed his one-year master's program and returned home to resume his career in the summer of 1989.

During this initial year of operations it was decided, for a number of legal reasons, that the inter-university group be disbanded to be replaced by individual committees within the various universities. It was at this point that the Lester Pearson Institute took over as the base of the project.

The project was named the South African Student Education Project (SASEP) and a Steering Committee for the project, consisting of a number of individuals interested in South Africa and other members acting more in ex-officio roles was established. One of the South African students at Dalhousie sat as a member of the Committee. Key roles of the committee were in the areas of coordination and fund raising, the placement and counseling of students, and administration and financial management. Since inception an informal executive has taken principal responsibility for these key needs. This group has been J. Hall, (Department of Earth Sciences) who has been most active in the area of coordination and fund raising, I. Abraham, (School of Pharmacy, and representing the Dalhousie Faculty Association), placement and Patricia Rodee (Assistant Director, LPI) administration and financial management.

The important first step in finding funds to support students at Dalhousie was taken by students involved in the Development Economics Program at the university. A proposal was put forward that a referendum be held by the Dalhousie Student Union (DSU) in which all students would agree that a levy of \$1.00/annum be placed on each member of the DSU to support the studies of a South African student. The students supported this proposal, which has led to an annual contribution of between \$7500 and \$8200, sufficient to support one student annually on a cost-shared basis. On the strength of this support, a proposal was made to the Dalhousie Faculty Association (DFA) for an annual block grant of \$7500 to provide the Dalhousie component of matching funds for a second student. This proposal was also successfully supported by the DFA. Subsequently, several organizations on campus, including the DFA, the Dalhousie Staff Association, the Dalhousie Administration Group, agreed that individual members might be approached for support. With help from the Personnel/Payroll Department of the university, a scheme was established whereby individuals could commit to having small contributions deducted from their monthly payroll. This scheme has been successful, and, together with lump-sum giving, has provided a further \$4000-\$5000 per annum for the support of South African students. Giving in this way it has been facilitated by the issuance of tax receipts to all donors through the assistance of the SAETF which is a registered charitable organization. Additionally, SASEP has received occasional support from the Dalhousie Association of Graduate Students, the City of Dartmouth and the Anglican Diocese of Nova Scotia.

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With a structure in place, and funding assured, the Steering Committee of SASEP was able to place two new students at Dalhousie in the fall of 1990, as well as continuing to support the student already in the Math program. Upon the request and at the total expense of the SAETF, a further student, was placed Dalhousie at this time. Thus, in fall 1990, three new students, two men in the School of Education and a woman in the School of Library and Information Studies started programs at Dalhousie. All entered directly into Masters programs. One of the students in Education had a math/science background and was interested in strengthening his teaching skills in this area. The other has a special interest in Adult Literacy. The student in Library Science had been a school librarian in South Africa, with only the most modest resources, and had to work hard to become familiar with modern, computer based, library information services.

The project graduated its first student, with an M.Sc. in Mathematics, in May of 1991.

The project graduated its first student, with an M.Sc. in Mathematics, in May of 1991. A new student was placed at Dalhousie in the fall of that year, using the annual funding which had previously supported the original student. The new student placed by SASEP, a woman, began a qualifying year in the School of Nursing in September 1991. Subsequently, she has been admitted to the masters program in Nursing, which she hopes to complete with a specialization in child psychiatry in 1993. This is an area of great need in South Africa with so many children experiencing disturbance through unrest and violence.

In the fall of 1991 the SAETF again requested that the project accept and place a student at its total cost. This student had completed a qualifying year at another university, but could not be placed in a suitable masters program there. The student in question started a second qualifying year in fall of 1991 in the School of Recreation, Physical and Health Education. Unfortunately, he was unable to gain acceptance to the graduate program and returned to South Africa in May of 1992.

To date (June 1992) the project has witnessed the successful graduation of three students, one each in Math, Education and Library Science. As well, a fourth will complete his degree in Education later this summer, while the fifth will be starting the Masters in Nursing this fall.

The SASEP Committee had assumed, with three students due to graduate in 1992, that one or possibly two new students would be able to be placed at Dalhousie in the fall of 1992. It was instead advised, however, that the SAETF was reviewing its role in the support of students, and that it would not continue to be involved with graduate education, beyond commitments to students already in the program.

It has been concluded that graduate education is the most valuable service which the university can offer young South Africans.

As a result of this uncertainty about the SAETF's future plans, there had been discussion, both within the Steering Committee of SASEP, and with the South African students, as to the merits of continuing with different kinds of activity. It has been unanimously concluded that graduate education is the most valuable service which the university can

offer young South Africans. As a result of this conclusion, SASEP is now seeking partners other than the SAETF so that graduate education can continue to be provided at Dalhousie for a small number of non-white South Africans. Various options being considered include establishing a direct linkage with one or more universities in South Africa, accessing the U.S. program for its assistance in student selection, and identifying a group in CIDA with which to work.

Various Aspects of the Project

Student Placement

It has been illuminating to see the response of different units in the University to requests that fully funded but academically weak non-white South African students be accepted into their graduate programs. Successful responses have generally depended on the sympathetic interest of one or more individuals and, in the case of the School of Education, a strong positive response on behalf of the unit as a whole. Placing students has been particularly difficult when departmental graduate coordinators have evaluated student applications on the basis of grades alone, both because South African grades are conventionally lower than Canadian grades for the same standard of work, and because the students being proposed are generally weak as a result of poor and/or interrupted high schooling, lack of enrichment at home, and so on.

Successful responses have generally depended on the sympathetic interest of one or more individuals and, in the case of the School of Education, a strong positive response on behalf of the unit as a whole.

Student roles on returning to South Africa

To date, information on activities undertaken by returning students is available only on the first student in the program, who completed his M.Sc. in Mathematics. Since returning in the early fall of 1991, this individual has taken on two positions. The first is honorary as the Executive Director of the Siyabuswa Educational Improvement and Development Trust (SEIDET), an educational improvement group which was established in the local township with considerable input from the Dalhousie graduate. SEIDET's objective is to improve and upgrade the academic qualifications of non-white South Africans who have completed their final year of high school, Standard 10, without reaching the level required for university entrance. SEIDET uses the educational skills of people from the university local university and business communities as well as the facilities of local colleges.

The second position, which is salaried, is as Head of Planning and Statistical Services within the regional arm of the South African government. In this capacity he is involved with physical, economic and community development planning as well as supplying statistical services for higher management.

All those involved with SASEP feel that this young man's involvement in his community is an ideal outcome of his experience in Canada.

Assessment

To date, there has been no formal assessment of the activities of SASEP. There has, however, been an assessment of the SAETF which perhaps has resulted in the fund's withdrawal from the area of graduate education. This assessment has not been made available to SASEP.

Management Map



Lessons

A first lesson in this project has been the value of having the Lester Pearson Institute as a home for the project. This has provided SASEP with a recognized, stable base, while offering access to administrative, accounting and financial support.

Appropriate students must be selected... careful preparation must precede requests for funding... regular reporting to all interested parties must be made on the progress of the project.

A second lesson learned has been the fact that proper coordination of all elements of the project is essential if the project as a whole is to be successful. Appropriate students must be selected, a daunting task if we had to undertake it with only our own resources; academic units and the Faculty of Graduate Studies must be aware of and sympathetic towards the project; careful preparation must precede requests for funding; regular reporting to all interested parties must be made on the progress

of the project. The Dalhousie News has been most helpful in this latter regard.

Finally, a strongly motivated volunteer group is needed. This group must personally implement decisions of the Steering Committee as well as help with the inevitable but unpredictable human-based problems which students living away from home encounter. Most South African students have been acutely homesick during the fall and winter of their first year. Being on average older than Canadian students at the same stage of their education, several have had to leave spouses and children behind. Encouragement, practical help, and support has been needed to address the problems resulting from the loneliness of long separations and extreme financial sacrifices necessary for study in Canada.

Finally, a strongly motivated volunteer group is needed.

PART VI

**THE ENVIRONMENT
AND DEVELOPMENT**

Introduction

Impacts from the Rio 'Earth Summit' and associated processes can be felt throughout many of the programme activities of Dalhousie University. Indeed a growing commitment to the quest for more sustainable forms of development is traceable sometimes in the least expected areas of activity, as some student or some researcher makes the very kinds of connections argued for so eloquently in the Brundtland report. This section focuses on three initiatives of the university — the establishment of a School for Resource and Environmental Studies, the development of a major international programme of cooperation with Indonesia and a somewhat more modest programme with the Philippines.

International Environmental Management and The School for Resource and Environmental Studies

by Ray Côté

The School for Resource and Environmental Studies (SRES) contributes substantially to Dalhousie University's international development work. It has a faculty complement of 5.5 positions, augmented by a network of cross appointments from other departments. Its student body comprises 35 graduates at any one time — at various stages of course work and thesis research for the Master of Environmental Studies (MES) degree. Between 10-20% are normally from overseas, frequently linked to the international projects of the School. In addition some students from other programmes (e.g. MDE and MMM) take a number of the classes taught as part of the MES programme. Early in 1993, SRES housed approximately \$40 million worth of international development project commitments. This work generated approximately 30% of the School's operating funds on an annual basis. Interestingly enough, only the three smallest of these projects are directly managed by SRES faculty: environmental planning and assessment of hydro-electric projects in China jointly with the Technical University of Nova Scotia and two Chinese universities; development of management of industrial chemicals and wastes and related training in the Caribbean; and, in Russia, chairing the Environmental Policy Working Group of the Canada-Russia Mixed Environmental Commission, as well as establishing a linkage between Dalhousie University and the Mendelev Institute.

International activities have been an integral part of the programs of the School for Resource and Environmental Studies for more than a decade. This is due, in part, to a recognition that resource management crosses jurisdictional and ecological boundaries and increasingly has global implications. This is seen in the case of such issues as ozone depletion and loss of biological diversity.

From the School's point of view, the very nature of the environmental and resource system with which we are concerned implies several possible arenas for its programs. Teaching, and potentially research, may cover global environmental issues which have significance for all of the earth's living systems. They may also focus on a cross national area covering more than one jurisdiction and which may be regional in scope. The School has been active in regional marine studies in New England and the Atlantic Provinces. A third arena is that of international development, emphasizing capacity-building in societies where poverty, inequality, and underdevelopment creates difficulties for environmental and resource management. The School's long standing involvement in Indonesia, as well as more recent partnerships in the Philippines, the Caribbean, China and new initiatives in Russia are examples. As described in the article by Shirley Conover, Dalhousie, through the Development of Environmental Study Centres (DESC) and Environmental Management Development in Indonesia (EMDI) projects have been building the capacity of universities, government agencies, non-government organizations and private consultants to address that country's environmental stresses. Yet another arena is that of comparative studies where similar problems occurring in several countries provide opportunities for research into similarities and differences. To a certain degree, this is being achieved through teaching and research in the Masters of Environmental Studies program as well as in our sister program the Master of Marine Management.

SRES has been and will continue to be involved in work in all these arenas. The School's mission is expressed in a number of current activities including: teaching with the use of case studies from international projects, thesis research opportunities supported by these projects, support for faculty research, and professional enhancement fostered by faculty exchanges and work opportunities.

The School has set some goals for itself which are designed to strengthen first our capacity to assist the international partners with which we will collaborate in the future and second, our ability to improve our teaching and opportunities for research. These goals include: integrating international perspectives into teaching, research and community service programs; emphasizing environmental institutional strengthening and human resource development as core themes in international work; enhancing opportunities for teaching and research in international projects; developing a program of professional training in international environmental management and; developing and maintaining a network for information exchange and technology transfer among graduates and colleagues in collaborating institutions.

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NEEDS AND CHOICES:

THE INDONESIA AND PHILIPPINES ENVIRONMENTAL MANAGEMENT AND DEVELOPMENT PROJECTS

by Shirley A.M. Conover

I. Introduction

Project Profiles

It is with the two largest of the projects 'housed' by the School for Resource and Environmental Studies that this paper is concerned: the Environmental Management Development in Indonesia (EMDI) Project; and the Environment and Resource Management Philippines (ERMPP) Project. The EMDI Project is currently in what is almost certainly its largest phase: Phase 3 is for \$34 million over five years. Planning for a potential EMDI Phase 4 is underway. The ERMPP Project is near the end of its first four year phase (at \$4.9 million), has been awarded an extension, and has completed the design work for a second phase (of slightly more than double the dollar value of Phase 1, assuming funding can be assembled from the Canadian International Development Agency (CIDA) and/or other sources).

It is with the two largest of the School's projects that this paper is concerned.

Both projects are legacies from the School's first Director, Arthur Hanson, now President of the International Institute for Sustainable Development in Winnipeg, Manitoba. Dr. Hanson thought globally and thought "big", even though his direct influence on the EMDI Project ceased by 1988, and he only "fertilized the embryo" in 1986 that became ERMPP in 1989. The author of this paper was present at the signing into existence of EMDI in 1983, organized, managed, and helped teach the first environmental assessment course given on the Project in the summer of 1984, and joined Dalhousie University as EMDI's full time manager in Canada in 1986. She was responsible for the design, documentation and negotiation work for Phase 3, and was Project Director from 1988 until 1992. Her final task with EMDI 3 is writing a book about the Project, to be completed in 1994. She also led the design team that followed up the preliminary feasibility work and brought the Philippines ERMPP Project into existence in 1989,

and has served to the present time as its first Project Director. Thus, while hopefully a long-standing commitment to the success of these projects should serve to provide insights and otherwise-hard-to-acquire details, some degree of subjectivity will also be inevitable.

It is on those Project similarities and differences that this paper will focus.

Both EMDI and ERMPP are located in Southeast Asia and both have similar objectives — to help those nations strengthen their capacities to manage their environments in the context of rapidly changing patterns of economic development. Indonesia and the Philippines have similar resource bases, similar expanding population problems, similar geographies as island archipelagic nations, similar economies, similar desires to develop, centralized government systems wishing to decentralize, similar environmental management needs, but different political and cultural climates. However, the EMDI and ERMPP Projects are quite different in character, quite apart from their relative size and maturity. It is on those Project similarities and differences that this paper will, in part, focus, since there is a larger and instructive story there. It is this analysis that gives rise to the paper's title: "Needs and Choices".

The Total Environmental Management System

Before addressing "needs and choices", it is necessary to define environmental management.

Before addressing "needs and choices", it is necessary to define environmental management, and even more importantly, to examine who does it. The author's work has committed her to the concept of "Total Environmental Management Systems", reflected first in the work of Poel and Boase (1991). "Management" is here defined as "to organize, regulate, or be in charge of". The connection is clear between human-generated activity (management) and "the environment" for which we have come to understand that a comprehensive definition must be used that encompasses the natural environment, complete with its ecosystems and ecosystem-generated life support systems, the human-modified environment (sometimes called the "built environment"), the sociopolitical-socioeconomic-sociocultural environment, and the ethical environment, all of which are subsumed in the concept of "sustainable development". (A closely related concept in ecological economics is that of natural capital, manufactured capital, and cultural capital; see Berkes 1992 and Conover 1993). The identification of the connection between "management" and "environment" obviously is not to imply that humans control at will all the systems which generate and sustain the natural environment, although humans control all-too-many of the systems which bring about the destruction of the natural environment! **It is to prevent environmental destruction and to enhance environmental preservation and renewal that environmental management policies and actions are developed and employed.** It is obvious that those engaged in environmentally destructive actions are also engaging in "environmental management", but of a negative sort.

So who "does" environmental management? Six main 'organizational' groupings, knowingly or not, participate in "environmental management": people as individuals or in family/local community groups; their governments; their private sectors; their educational systems; their voluntary sectors (non-government organizations or "NGOs"); and their communications media in their many forms. In the author's view, these six groups and the many ways the individuals within them organize themselves constitute the "Total Environmental Management System" of any country (Figure 1). People generate ideas, and from these flow unplanned and planned actions relative to the environment and its natural resources.

It is important to recognize that such a system operates at "all levels" of institutional organization. The individual taking the trouble to dispose of his or her toxic cleaning fluid at a neighborhood hazardous waste collection facility and a First Minister or President announcing his or her country's sustainable development commitments at the United Nations Conference on Environment and Development are both exercising important environmental management actions, one at the grass roots and the other at the highest national level in an international forum. All individuals belong to at least one group, and many to two, three or more groups. The rulers, leaders, influentials and decision-makers derived from each group are shown in the centre, since such people tend to exchange ideas, develop policies and programs, initiate actions, and generally influence each other and present and future directions. There are obviously thousands and thousands of actions that can be classified as contributing positively or negatively to environmental management.

Environmental management ideas and initiatives can originate from, and must be applied at, any and all levels from systems of governance at the international level right down to and up from the grass roots, and to and from any level in between. Figure 2 tries to illustrate this system "hydrologically", with a rain of ideas for understanding and action falling from the "clouds" in the "sky", supported equally by a rising flow of ideas from "ground water wells", with exchanges and other ideas being contributed to and from the levels in between. The groupings here are somewhat different than in Figure 1, with the divisions being drawn between people and communities, governments, and "developers".

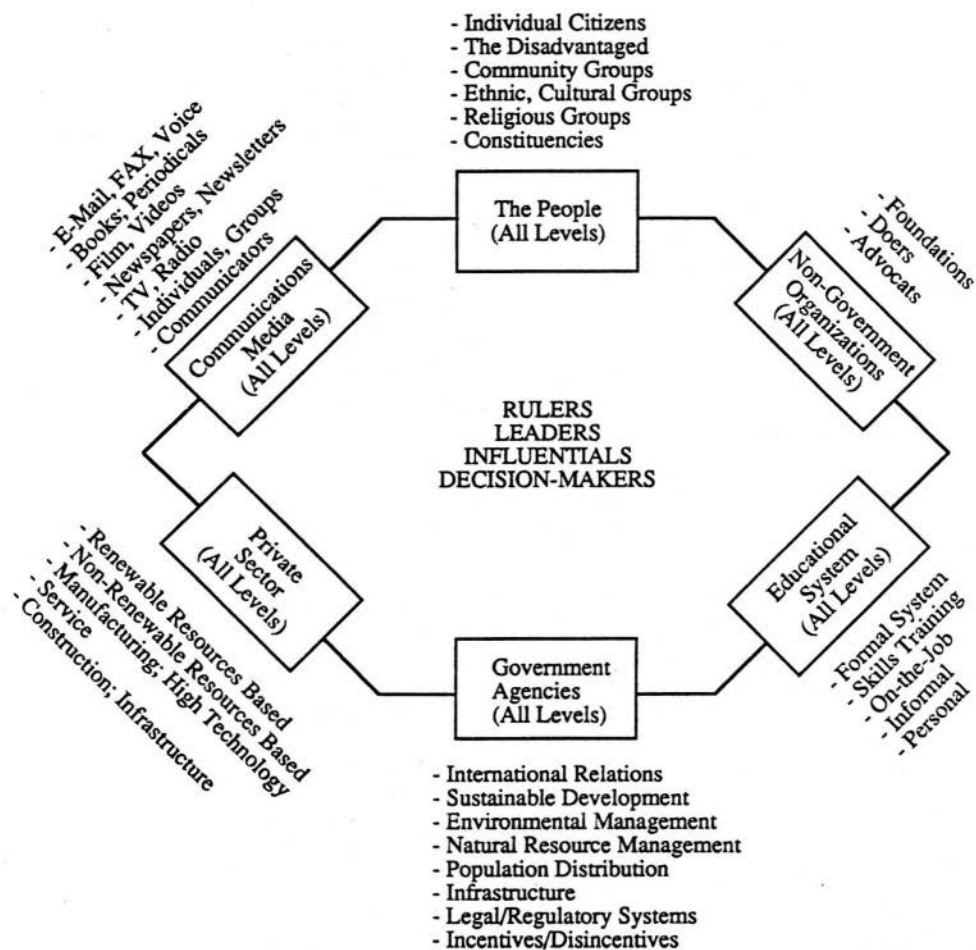
Figure 2 also illustrates the observation that no one level of organization can "do it all" in environmental management. There are, for example, many positive aspects about the present initiatives to decentralize on the parts of many governments and other agencies, including those in Indonesia and the Philippines. However, the larger the system or area under consideration for environmental management actions, the greater will be the need for the rational involvement of higher levels of governance as well as effective integration of the needs and concerns at the lower levels. This may generate the need to work in

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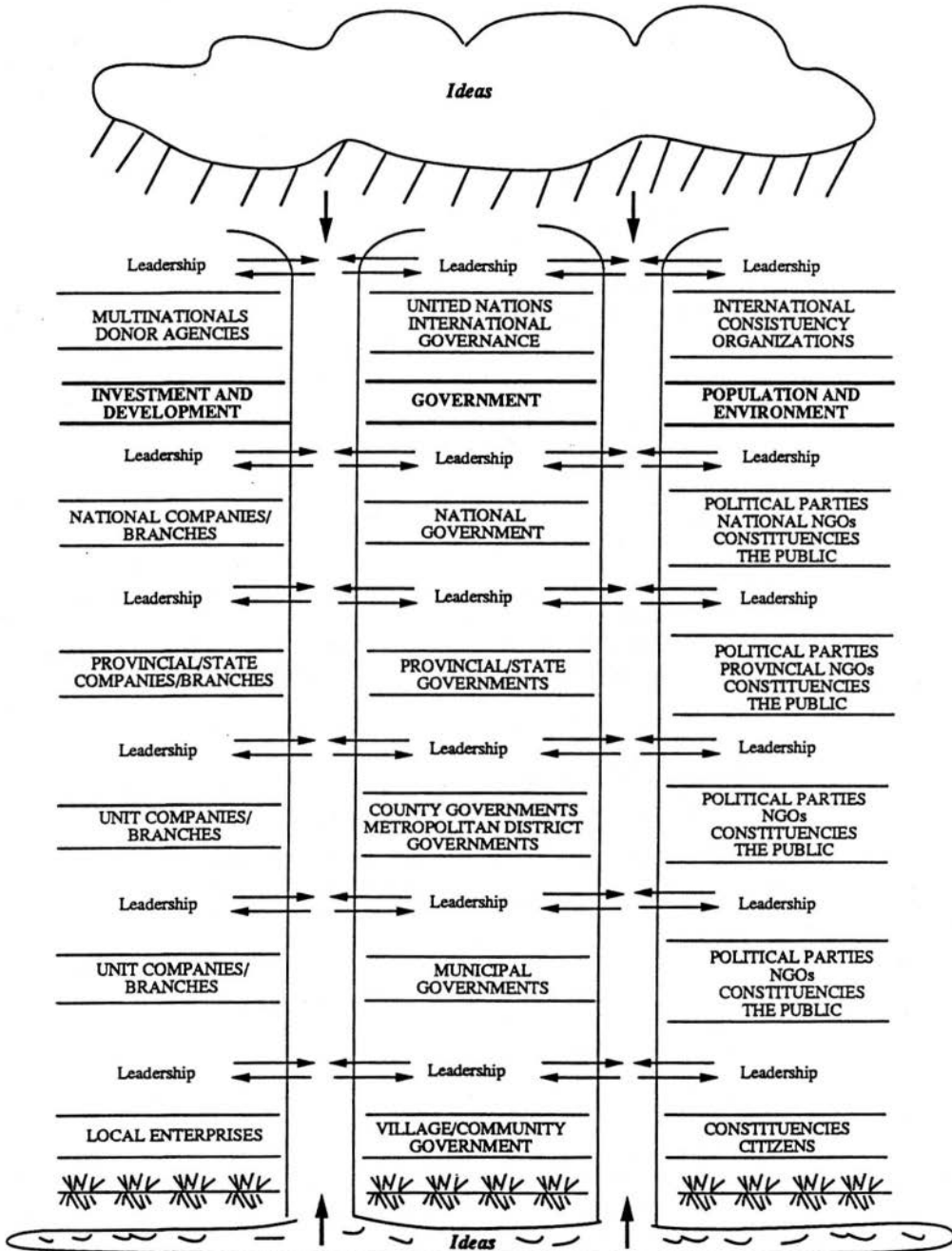
FIGURE 1

Generic Environmental Management System, Any Country



Shirley A.M. Conover

FIGURE 2
Generic Environmental Management and Communication System



Shirley A.M. Conover

'ecologically determined' units, such as river basins or coral reef complexes. In such cases the needs and desires of residents have to be balanced off against the needs and desires of their broader societies, raising difficult issues of distributional effects on individuals and groups, and social equity.

The focus was on assisting with the development of a system of Environmental Study Centres

In designing projects and interventions to improve environmental management, the designers must recognize which groups (or individuals within those groups) and which level(s) of the Total Environmental Management System the project interventions are targeted to assist. This is an important aspect of strategic planning. Confusion on the part of the designer(s) about the target group(s) and/or levels involved can frustrate the best of intentions. It is on the similarities and differences between the primary target groups that the EMDI and ERMPP Projects demonstrate their greatest differences and hence their characters. This will be expanded on in the course of the individual project reviews.

II. The Environmental Management Project in Indonesia

Brief History

The Environmental Management Development in Indonesia (EMDI) Project owes its origins to Arthur Hanson's service as a Ford Foundation Program Officer in Indonesia in the period 1973-1978. He came in contact with the small group of well educated "individuals" in the Indonesian government and university complex who had established a Bureau of Environment in the Government's national economic planning agency in 1975. This followed their exposure to the environmental ferment during their educations in North America in the 1960s and the United Nations Conference on the Human Environment in Stockholm in 1972. On Dr. Hanson's return to Canada, his main research focus remained on Indonesia. He received a series of small grants from various international funding agencies, including CIDA, to support this. The focus was on assisting with the development of a system of Environmental Study Centres, fostered by the Indonesian Government's new agency, now known as the Ministry of State for Population and Environment (KLH). These Environmental Study Centres were comparable, in structure and functions, to Dalhousie University's own Institute (now School) for Resource and Environmental Studies.

EMDI Phase 1

CIDA was able to be rather more experimental in the early 1980s than perhaps it is now. When approached by Dr. Hanson and his Indonesian colleagues for support of a more comprehensive project, CIDA agreed to fund a \$2.5 million three year project starting late in 1983, called in

its first phase the "Environmental Manpower Development in Indonesia Project". Indonesia's Minister of the Environment, Prof. Dr. Emil Salim, identified several reasons why Indonesia deliberately chose to work with Canada:

- Canada was seen as a neutral and objective country. The U.S., Japan, Australia and other developed countries were all rejected because of various foreign policy, economic or other conflicts of interest.
- Canada was a developed, industrialized country but with little commercial involvement in Indonesia at the time, so there was low potential for commercially-driven conflicts of interest when the primary objective was the development of manpower skills in environment through overseas and in-country training programs.
- It was a particular advantage that the Canadian Project Director knew Indonesia and many of the key players in the environment. A project focused on human resource development objectives belonged naturally in a university.
- The Canadian, Maurice Strong, was known and respected by the Minister — from the days when he had chaired the Indonesian Delegation to the Stockholm 1972 Conference.
- Canada was willing to try the kind of experiment of a South-North relationship that appealed to the Minister.

Canada was seen as a neutral and objective country.

CIDA's Indonesian Country Program Director made some important observations about EMDI in its first five years (P. Morgan, communication, 1993):

- EMDI legitimized a new family of [environment] projects; it was the first of its kind;
- it was the first of the true Partnerships between host country and donor country organizations; it depended more on Indonesian expertise than Canadian to set its priorities and directions, and was built on things that mattered to the Indonesians, to which the Canadians were committed as well;
- EMDI demonstrated how institution-strengthening projects could be done: learn first, and then scale up as one learns how to do it; in the process, EMDI destroyed the notion of the classic project cycle as the only way to do projects;

EMDI legitimized a new family of [environment] projects.

- the Indonesians saw the EMDI Project as helping to build up the Canadian capacity in environment in the international context, and that this was a legitimate use of the Canadian aid process;
- EMDI demonstrated the importance of having paired Project Champions, at least one on each end, who cared desperately about the Project, and made it work from both ends;
- EMDI's mode of operation, and a secret of its success, is not managing and delivering, but primarily facilitation.

The general objective of EMDI Phase 1 was "to expand the numbers and capabilities of Indonesian managerial, technical and scientific workers required to implement resource and environmental management in national and regional departments".

The general objective of EMDI Phase 1 was "to expand the numbers and capabilities of Indonesian managerial, technical and scientific workers required to implement resource and environmental management in national and regional departments". Five specific objectives were defined. Project activities were developed to meet each of the five:

- environmental impact assessment, management and training;
- a graduate degree Fellowship program for selected Indonesian graduate students, including potential environmental lawyers;
- development of twinning arrangements between Canadian and Indonesian university environmental study centres;
- assistance with the education of Indonesian environmental NGOs to enable them to develop and manage their own programs; and
- convening a major conference on Indonesia in Canada to bring together Indonesian and Canadian environmental managers to exchange ideas and experience, showcase Canadian talent in the environment, have Canadians gain an understanding of Indonesian environmental problems and needs, and develop interests in working together.

Provision for Project management was also programmed into EMDI 1.

EMDI Phase 2

As EMDI 1 drew to a close, three important things happened. The Indonesian OPEC oil pricing-generated "windfall profits" were considerably reduced after 1982, and KLH found itself in much reduced circumstances. It not only could no longer support the development of the system of environmental study centres with research funds, it had its own problems. As a new, weak Ministry of State dealing with

concerns between development and environment, it had little ability to command a large allocation of scarce government resources. For this reason, KLH discussed an addition to the focus of the EMDI Project with Dalhousie University and CIDA in the form of assistance to KLH itself as well as to the Environmental Study Centres. The primary focus of the Project thus switched onto KLH, although substantial assistance remained with the Environmental Study Centres.

The second change resulted from the EMDI I CIDA Evaluation. The Project was judged highly interesting with lots of future potential, but the project management system was much in need of improvement. CIDA made it a condition of continuation that Dalhousie University hire project managers, with substantial professional project management skills and experience as well as environmental backgrounds, to institute proper management services and systems for the Project in both the Canadian and Indonesian Project offices. The author was one of the two managers brought in from the private sector (August 1986) to initiate EMDI Phase 2.

The third important item was that Minister Salim was appointed to serve on the United Nations World Commission on Environment and Development (the "Brundtland Commission"). The product of the Commission, "Our Common Future" (WCED 1987), has been internationally influential, and expanded even further the Minister's world view and understanding of environment, population and development relationships. Conceptual leadership for EMDI Phase 2 was dominated by Minister Salim.

The EMDI Phase 2 objectives encompassed a much larger scope than those of Phase 1 as the result of these several factors. The objectives were:

- Enhance KLH's institutional effectiveness in providing guidance and technical input to sectoral departments and provincial government agencies in order to integrate environmental management concepts into national and regional development planning.
- Strengthen Environmental Study Centres, private sector, and NGOs institutional and human resource capacities to provide support services needed in the implementation of environmental management concepts in national and regional development planning.
- Facilitate cooperation and institutional linkages between Canadian and Indonesian universities, government agencies, NGOs, and consulting firms concerned with environment and sustainable natural resources management.

The EMDI Phase 2 objectives encompassed a much larger scope than those of Phase 1.

Likewise, the program and budget of EMDI Phase 2 became significantly larger (the three year Project eventually ended at more than \$7.7 million). EMDI 2 was a CIDA Country Focus Project done under a Contribution Agreement, a very effective contracting instrument for a Project which needed to evolve, grow and respond to emerging issues and requirements.

EMDI 2 also took on a strong pan-Canadian aspect, with the best qualified advisors and the most relevant inputs sought, regardless of location or source.

EMDI 2 also took on a strong pan-Canadian aspect, with the best qualified advisors and the most relevant inputs sought, regardless of location or source. Since assistance was focused on KLH, the primary characteristic of chosen Canadian advisors was usually experience and quality performance in doing similar, often the same, task in Canada with government that KLH wished to institute, either as a government employee or as a consultant working for government. The roles that university academic personnel could play in KLH were limited, although new graduates could be placed as CUSO cooperants or junior faculty in the Environmental Study Centres. Peter Morgan once said that CIDA initiated EMDI Phase 1 in order to access Art Hanson's networks and contacts in Indonesia. In EMDI Phase 2, the Project bought into the author's broadly based Canadian environment and resource-based network built up over 12 years of environmental work for the private sector and government, and service on such government-related bodies as the Natural Science and Engineering Research Council (NSERC) Strategic Grants in Oceans Panel and the Canadian Environmental Advisory Council. The latter was especially valuable in providing the opportunity to work interactively at the most senior levels of the Canadian government.

EMDI Phase 2 consisted of ten technical assistance components:

- hazardous substance management;
- regional spatial planning: urban, rural, industrial;
- ecosystem management (coastal and river basin) and environmental quality standards; in fact, this component focused only on the pollution control aspects of these areas;
- environmental impact assessment: preparation, evaluation, monitoring and implementation;
- environmental information systems;
- environmental law;
- environmental education and awareness building (NGOs);
- strengthening Environmental Study Centres and university linkages;
- technical advisory function; and
- publications development and international literature transfer.

Project management is, of course, also included. Rather than describing the activities carried out in each of these components in rather dull detail, specific examples will be presented in subsequent sections to

provide a better sense of the flavour and excitement of the Project as it has continued to evolve. It is useful to note which units and levels of the Indonesian Total Environmental Management System were targeted: central government at the highest level; the NGOs, mainly at the most centralized level; the private sector at the working level in environmental management; and the educational system at the post-graduate and faculty levels. The environmental management flows were to be primarily from the top down.

EMDI Phase 3

EMDI Phase 3 probably represents the maximum size and complexity that this Project will attain. This is consistent with CIDA's strategy in institution strengthening to start small, and (if it works) gradually to increase support to a maximum level, and then gradually reduce support as the institution(s) achieve greater degrees of self-sustainability. Fifteen to 25 year cycles have been mentioned for high profile investments of this type, although all such "commitments" are subject to the vicissitudes of pressures and changes in direction that CIDA and the Government of Canada undergo in changing political and economic climates. In fact, EMDI may be one of the most successful of Canadian international development projects in sustaining commitments for 11 years to date. It may also be significant that this and other long-lived institution strengthening projects are implemented by universities.

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The three objectives developed by KLH and Dalhousie University for EMDI 3 built on the objectives of the previous programs, but reflect also the progress which KLH was making in its grasp toward maturity and influence:

- Strengthen KLH's ability to give national level guidance to those agencies and organizations charged with responsibilities for implementing environmental management and sustainable development.
- With KLH, strengthen the capabilities of those agencies and organizations outside KLH charged with responsibilities for implementing environmental management and sustainable development at the central, sectoral and regional levels.
- Facilitating the development of linkages between Indonesian and Canadian organizations and individuals in the area of environmental management with potential for long term mutual benefits to all parties and the environment.

The design period for EMDI Phase 3 corresponded with an interregnum between the government of the previous five year plan and the new government that would bring in a virtually new second level in KLH, through promotions of the energetic staff from the former third level, to

address the new five year plan. Although the author had spent a number of working visits with the Project in Indonesia, this was her first opportunity to work directly and on her own with KLH. She met at first the usual "getting-used-to-working-with-you" period that any expatriate experiences in Indonesia or, indeed, in most other cultures.

The main planning exercise took place as a series of three workshops. The first involved the author working with a selection of senior KLH and other Indonesians with whom EMDI Phase 2 had worked. Some progress was made, but "learning to work together" dominated. One force preferred the strategy of "just provide us with a large lump of funds, and we will decide as we go along what we will do with it". In spite of the flexibility and evolutionary capacity that has characterized EMDI, it has always worked within a well defined framework, so this was not a viable strategy. For the next workshop, the Indonesians requested the opportunity to work alone. What to them were useful discussions were held about how the various units in the reconstituted Ministry could integrate or be mutually supportive of each others' work and responsibilities, but little of direct use to EMDI 3 planning emerged from this.

The log jam was broken at the third and final workshop.

The log jam was broken at the third and final workshop. For this work-shop, the author's counterpart became Nabel Makarim, who was shortly to become KLH Assistant Minister 3, and ultimately the prime mover in the founding of the Environmental Impact Management Agency (BAPEDAL), an important offshoot of KLH discussed below. Bpk. Nabel was a graduate of both the Massachusetts Institute of Technology international development program and the Harvard University Kennedy School of Public Administration, and was more familiar than most Indonesians with the requirements for project design. He suggested a workshop format where he would lay out, to the best of his knowledge, the KLH priorities based on speeches by, and discussions with, Minister Salim. The author should then provide a short form which each of the workshop participants could use to describe initiatives that he/she or his/her unit should undertake in the context of the new five year plan. Workshop participants included another soon-to-be KLH Assistant Minister, and representatives of the next two levels down in each of the four new Assistant Ministers' groups.

About 45 suggested project initiatives were described and submitted; a criterion for submission included being related to one of the priority areas identified in the earlier portion of the workshop. This had the very positive effect that the initial planning was done by those individuals who would ultimately either be responsible for, or would do the work.

About 45 suggested project initiatives were described and submitted; a criterion for submission included being related to one of the priority areas identified in the earlier portion of the workshop. This had the very positive effect that the initial planning was done by those individuals who would ultimately either be responsible for, or would do the work. Later, these individuals were bought in very quickly to EMDI 3 because the programs decided upon were **their programs**. The next steps involved doing a rough costing of each program; that total came to about \$82 million exclusive of equipment! Obviously, priority setting and winnowing down were in order, since the original planning target had been \$15 million for the KLH program. This was accomplished in

two more small working sessions with the Minister and his most senior staff (future Assistant Ministers). Criteria used were:

- priorities as set by the Indonesian Government based on its perception of present and emerging realities and its appraisal of problems at hand;
- Canadian 'comparative advantage': degree of availability of Canadian resources compared with other donor countries and agencies;
- continuity with previous and on-going (successful) EMDI activities, although new areas could also be added if there was good justification; and
- degree of anticipated impact, both short term and long term.

After further discussions with CIDA, a base Project of \$31.8 million over five years was negotiated; the inflation funds which were added in early on made it about \$34 million. This included the University Consortium on the Environment, a \$5 million project in its own right which had grown out of the EMDI Phase 1 university twinning arrangements (which did not involve Dalhousie University) which Dalhousie was to administer on behalf of CIDA. Dalhousie University and KLH were extremely fortunate in the CIDA Project Team Leader, Mr. Stanley Moore, assigned to the design process. This very large Project made it through the CIDA approvals process, including Treasury Board of Canada approvals, in nine months. Two more months were required to develop the Contributions Agreement based on the Management Plan which had been developed by the author and KLH using CIDA formats. The Management Plan became the formal Agreement between KLH and Dalhousie University. Using this format was a great advantage, since CIDA could use the same base document for its approvals process as Dalhousie and KLH; another extremely effective technique suggested by Mr. Moore.

EMDI Phase 3 is a large Project, which may seem complex to those not familiar with challenges senior government agencies must meet when responsible for environmental management, and how they organize to do so. EMDI Phase 3 was divided into four areas (though the latter two represent a "funding sophistry"), with activity areas or components under each:

EMDI Phase 3 is a large Project.

AREA 1: KLH PROGRAM

- natural resources evaluation and spatial planning;
- environmental quality standards, including global climate change aspects;
- the environmental assessment system;

- pollution control, focusing mainly on hazardous materials management;
- macropolicy development assistance;
- support systems, which included support for regional institutions, environmental information systems, the KLH library, the KLH publications program plus two of the four remaining Ecology of Indonesia books; environmental law; and the graduate Fellowship program;
- marine and coastal environmental management, which included two of the four remaining Ecology of Indonesia books;
- new initiatives, focusing on the interface between population and environment.

AREA 2: LINKAGES, EXCHANGES, AND SPECIAL ASSISTANCE

- NGO linkages;
- private sector linkages;
- University Consortium on the Environment;
- Dalhousie University program;
- special assistance to the Department of Public Works in environmental assessment (a special CIDA initiative that integrated well with EMDI's other work in environmental assessment).

AREA 3: PROJECT MANAGEMENT

AREA 4: PROJECT OVERHEAD

Again, an examination of the choices from all of Indonesia's many environmental management needs which KLH, Dalhousie University, and CIDA made is instructive. EMDI Phase 3 is an institution-strengthening, capacity building, human resource development project. It again has as its primary target groups in the Total Environmental Management System central government agencies, limited efforts to decentralize to the provincial and sub-provincial (regional) government levels, NGOs at both the central and working levels, the private sector at the working level, and universities at the faculty and graduate student levels. However, more opportunities developed for work at several levels including down to the grass roots in this overall program, as will be seen below.

EMDI Highlights

For this paper, a small number of outstanding examples of EMDI activities have been selected.

With a Project as large as EMDI now is, working with a senior level of government that is leading the developing world in environmental management (and conceptually is often way ahead of Canada and other industrialized countries), and with as long a history as it has, there are a very large number of results and lessons learned that deserve description. For this paper, a small number of outstanding examples of EMDI

activities have been selected. A few things that did not work as successfully as others are also included. Lessons learned from things that do not work can be as, or more, important than the lessons from those that do.

In what follows, it is important to recognize that KLH is a Ministry of State. In the Indonesian Government context, that means it has the ability to work cross-sectorally which the sectoral departments (such as forestry, mining and energy, industry, etc.) do not; and it can make policies, laws and regulations, but others must implement and enforce them. It cannot be an operational or implementing agency, such as a sectoral department; it cannot create national parks, for instance, although it can lead the policy development that creates the Cabinet agreement that national parks are good things and the Department of Forestry should create them. A Ministry of State can only work at the central government level, not in the provinces and below. As a result, the effectiveness of a Ministry of State depends heavily on the charisma and persuasiveness of its Minister to his/her President, his/her Cabinet colleagues, the provincial Governors and other provincial officials that he/she comes in contact with, and his/her profile and ability to command attention in the media, with the advocacy NGOs, in the educational system, in the private sector, and in popular esteem. In other words, in Indonesia, the Minister of State for Population and Environment has to be able to personally "pull the levers" on all the units of the Total Environmental Management System. KLH, and therefore EMDI, has been blessed throughout its existence with a superb exponent of the Minister of State "type" in Minister Salim. As this paper goes to press the new Indonesian Government has just been announced. A new Minister has been appointed and the Ministry's structure is to be modified.

Environmental Assessment Process

Although the primary model for the Indonesian environmental assessment process (AMDAL) was the Canadian federal Environmental Assessment and Review Process (EARP), there is little evidence that early Canadian work in this area through the small Dalhousie University Indonesia projects in the early 1980s had much affect on the design of the process itself. The AMDAL process was intended to be far more inclusive than the Canadian one: "initiating" departments or agencies were to form their own AMDAL review commissions to conduct the environmental assessment processes; the process was to examine all existing as well as all new developments (these numbered in the ten thousands); environmental management plans for construction and operation were to be written and implemented for all developments; and monitoring programs were to be instituted for all developments. The process desperately needed a screening mechanism to remove from full review those developments which did not require full reviews, it needed a licensing and permitting system to remove from full review the 98% or so of projects which could be so handled,

The process desperately needed a screening mechanism to remove from full review those developments which did not require full reviews.

and KLH lacked the capacity to play its roles of providing guidance, review and evaluation of the work of the AMDAL Commissions and the development proponents.

There were many positive things about the development of the environmental assessment process in the 1976-1986 period.

There were many positive things about the development of the environmental assessment process in the 1976-1986 period. It marshaled very useful indigenous technical and legal resources which have since become of great use to the Ministry. It demonstrated the need for comprehensive enabling legislation before any regulations could be put in place, resulting in the Indonesian Environmental Management Act of 1982, an extremely interesting piece of environmental legislation in itself. It certainly drew attention to KLH throughout the Indonesian Government system, even though it was a relatively weak Ministry of State. Once the other government departments and agencies got over the shock of having to do, or require to have done, environmental assessments, a few of them began to master the process and use it in its most effective form. This is as a development planning tool to **anticipate and prevent** environmental impacts and to build in mitigation features, rather than always operating in the unsatisfactory, expensive and often destructive react and cure mode.

Another problem was that the culture desires certainty of answers, especially for those early in their professional careers; but environmental assessment operates in the predictive mode where one does one's best, but there are many demands for best judgment calls.

The chief negative effect of the promulgation of the AMDAL process in 1987 was the impact on KLH's credibility when it found how much was expected of it, and which it did not have the capacity to meet. Along with that came the demonstration of the inadequacy in numbers, training and experience of the necessary human resources throughout Indonesia. The available AMDAL training left much to be desired; a primary problem was that the curricula were developed by academics with little or no experience as AMDAL practitioners. Another problem was that the culture desires certainty of answers, especially for those early in their professional careers; but environmental assessment operates in the predictive mode where one does one's best, but there are many demands for best judgment calls. KLH had very few senior staff, and those it did have were in inordinately high demand (and often had equally demanding part time responsibilities elsewhere), so had to send technically knowledgeable junior staff to AMDAL Commissions where they were hopelessly outclassed in relative rank (important in Southeast Asian cultures). These problems are not unique to Indonesia, nor even to developing countries. They did, however, create a high demand for EMDI advisors in AMDAL, and these needs have been supplied over the years in a variety of ways. The situation is much improved as the KLH evolution continued with the development of the BAPEDAL which operationalized AMDAL in this KLH descendent, but that story is described below.

A small but important 'women in development' (WID) lesson was learned by EMDI about the advisor-counterpart relationship through working with the AMDAL process.

A small but important 'women in development' (WID) lesson was learned by EMDI about the advisor-counterpart relationship through working with the AMDAL process. One of KLH's primary technical staff in AMDAL is a young married woman. After much contact

during EMDI 2, she finally got up enough courage to ask "Ibu Shirley, when you next get a Canadian AMDAL advisor for me to work with, would you look for a woman? We have to travel together a lot in Indonesia, and my husband does not like to have me travel with a Western man." We should have thought of that one! She got her woman AMDAL advisor. However, how well has EMDI, or other international development projects working with women professionals, learned that lesson?

Land and Resource Allocation

The allocation of rights to use land, water, and atmospheric resources between competing users, and taking into account effects on "affected innocents" and foregone opportunity costs are amongst the most difficult types of decisions that governments must make. In the end, they are often "political decisions", because some interests will win, and some will lose. An important task of Ministries of the Environment is to ensure that environmental considerations are fully factored in to such decisions, as long term costs, economic, social, environmental and political, can result from decisions which fail to take into account environmental attributes and human needs. Development and environment has always been a KLH orientation, as well as a KLH responsibility.

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KLH ASSISTANT MINISTER 2, Aca Sugandi Apandi, has understood this relationship for a long time, has worked with it while employed by the Department of Public Works, and was invited to KLH because of his knowledge of it. A primary tool for this aspect of environmental management has been the use of computer-based geographic information systems (GIS), which were supplied to Bpk. Aca's group in EMDI 2, and have continued in active use in EMDI 3. A large training effort was mounted in this area involving both Indonesians and Canadians. GIS is also being used as a primary tool in the Integrated Regional Development Management Programs, four integrated regional planning demonstration projects being carried out with long term assistance by EMDI. Results are not yet available from all of these four studies. When they are, it will be interesting to compare their results with those of the Laguna Lake Basin study in the Philippines Project described below since the methods, approaches and players were somewhat different, but the studies and purposes are conceptually the same.

One thing which Assistant Minister 3 has successfully facilitated is the development of Tata Ruang, Indonesia's Spatial Planning Act. This required years of interdepartmental meetings, working groups, and consensus building, let alone legal drafting. Most jurisdictions in other countries have been unable to take this on due to lack of the holistic view that environmental management requires, and blockages caused by entrenched systems of competing government mandates and responsibilities (national, provincial, county, municipal; sectoral). The

Indonesia's national Spatial Planning Act became operational in October 1992.

closest that Canada has come is things such as the Saint John River Basin Board (1970-1975) and the Ontario Conservation Districts. Some Canadian provinces have planning acts, although most formal planning takes place at the municipal level. Indonesia's national Spatial Planning Act became operational in October 1992. It will be an extremely interesting development to watch to determine its degree of success as a legal instrument of environmental management. Canadian advisors, supplied by EMDI, assisted with this process in both the technical and legal aspects.

Environmental Quality Standards

These standards are closely related to estimates of the carrying capacities (for humans) of Indonesian lands to support Indonesia's burgeoning population.

The Indonesian Environmental Management Act of 1982 specifies that a number of environmental standards will be developed for regulatory purposes. These include not just the "conventional" standards relating to pollution of air, water and soils, but also for such things as proportions of lands which should be maintained as "preservation", "production" and "conversion" forests, or as rice lands or for other crops. These latter standards are closely related to estimates of the carrying capacities (for humans) of Indonesian lands to support Indonesia's burgeoning population. Indonesia is the world's fifth most populous country, although it has also had an effective family planning program in place for nearly two decades. Better health care and longer life expectancies are having their effects, however, even though the birth rate is under reasonable control.

As soon as EMDI started working directly with KLH, amongst the first requests for advisors were for those in the area of environmental quality standards, specifically, water pollution. Subsequently, Canadian advisors have assisted with the development of effluent as well as ambient fresh water standards, industry-specific water pollution standards; air quality standards, especially those associated with urban transportation (a major problem in tropical third world cities including Jakarta and Surabaya in Indonesia); soil quality standards (both pollution and agricultural capability); and noise, light and vibrations. Work will soon start on marine water quality standards. Missing still is work on ground water quality standards, although much of the work on freshwater quality standards will apply. As soon as the standards were developed by counterparts and their advisors and passed through the various technical teams and interdepartmental consultations, regulations have been written to convert the sets of standards to environmental management tools with some "legal teeth". EMDI-provided Canadian and Indonesian legal advisors have assisted with the conceptual and legal drafting processes in the development of these regulations. However, the enforcement capacity is still very weak.

KLH has suffered from one jurisdictional problem, which still is not solved. The KLH Assistant Minister in charge of the natural environment has the responsibility for developing ambient pollution standards: what concentration of a given toxic contaminant can be

tolerated in the environment, such that more than that shall be prevented? The KLH Assistant Minister in charge of the "built environment" which includes releases of toxic contaminants (pollutants) regulates such releases through the use of effluent ("end of pipe") or emission ("end of stack") standards. This latter group has now moved over to the new agency, the BAPEDAL, which is discussed below. Management of pollution is regulated and controlled by the interactive use of the two types of standards; both are necessary. However, this becomes difficult when one group has the responsibility for ambient standards, and the other for effluent and emission standards; the "corporate cultures" of the two groups are different; and the two groups are physically separated. This discontinuity is only partially resolved, and may arise again as work commences on the marine water quality standards.

International Conventions

One of the challenges assigned to Assistant Minister 2 in 1989, as part of his responsibilities in the management of the natural environment, was to serve on Indonesia's delegations to the bodies working on the international Conventions on Global Climate Change and Biodiversity, leading up to UNCED in June 1992. Programming (as early as Workplan No. 1 (EMDI 3) in June 1989) identified the need for Canadian advisors in this area. In the case of work on the Convention on Global Climate Change, the need was especially acute. EMDI was able to access Dr. Ian Jackson, who had been working on the Global Climate Change position for the same International Convention, to assist Indonesia. The joint work was undertaken from the perspective of Indonesia's needs, not that of a developed country such as Canada (Jackson 1991). As a result of this assistance, Assistant Minister 2 was able to play his full part on Indonesia's behalf on the Convention Committee, helping to lead opinion from the perspective of the third world.

Indonesia is one of the world's major repositories of biodiversity, both terrestrial biodiversity in the humid tropical forests, and marine biodiversity in its many coral reef-surrounded islands. Through movements of the earth's crust through geological time, Indonesia has become the meeting place for mainland Asian, Australian, and Melanesian faunas and floras, and an evolutionary dispersal centre of marine fauna and flora. On all these counts, Indonesia's biodiversity resources are important. Initially the importance and potential economic as well as aesthetic value of biodiversity resources eluded people in both the developed and developing worlds, but progress is now being made. The potential and actual values of ecotourism, pharmaceuticals, and agricultural and silvicultural resources are being recognized. The environmental ethics aspect of biodiversity is also taken into account, although it may still count less heavily in the developing world than in the developed world (who unethically destroyed most of their biodiversity reserves over the last millennium).

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Three EMDI advisors have assisted KLH in policy development and public education in this area, again helping their Indonesian colleagues to lead the way at UNCED and subsequently in Indonesia and in other international fora.

What is produced in the end, however, is an Indonesian product, not a "made in Canada" one. This is as it should be.

It is in these kinds of initiatives that the EMDI "facilitation" role is seen very clearly. Concepts and hard information are gathered by the Canadian advisors, supported by the back-up of the Southeast Asia Environmental Collection and its staff at Dalhousie University. This is transferred to their Indonesian colleagues who add concepts and information of their own. All are discussed and considered from the Indonesian viewpoint. The advisors do extensive written reports with their counterparts (which EMDI publishes) as well as workshops and informal discussion sessions with senior officials including the Minister, so the material is made available in many forms for joint work and consideration. Although the advisors undoubtedly assist with opinion forming, it is the Indonesians who ultimately make use of the material for their own purposes and in their own ways. EMDI provides the resources, introduces some ideas and concepts, and may suggest recommendations and actions. What is produced in the end, however, is an Indonesian product, not a "made in Canada" one. This is as it should be.

Pollution Control and the Formation of the BAPEDAL

Although many initiatives have been successfully undertaken by KLH, the most obvious jewel in its crown to date is the formation of the BAPEDAL, the Environmental Impact Management (Control) Agency. EMDI has assisted with many of the groundwork initiatives, including the establishment of the BAPEDAL itself. This took place over a period of several years.

The first EMDI involvement was that of Dr. Margaret Taylor from Environment Canada, starting in 1987. She had just completed her work on the new Canadian Water Quality Guidelines for the then Canadian Council of Resource and Environment Ministers. She identified the tension between the ambient and effluent standards groups, found out much about the availability and limitations of Indonesian resources in water pollution control, and, with her Indonesian colleagues, developed a strategic plan for where KLH could move to next in its mission, not only to develop water quality standards, but which types could bring about the most rapid and visible progress in water pollution control (Taylor and Sukarsono 1991).

Related to Dr. Taylor's work, the Assistant Minister 3 for the Built Environment, Prof. Dr. Soeriaatmadja, brought a Technical Mission to Canada in 1988 to examine how Canada approached water pollution management and control. A member of this Mission was Vice-Governor Trimaryono S.H. of East Java who had considerable concerns and responsibilities in pollution management in the Brantas River

Basin, with special problems in the industrial city of Surabaya at the mouth of the Brantas where it empties into Madura Bay and the Java Sea.

Once Dr. Taylor completed her assignment in 1988, Mr. Jay Nagendran, an environmental engineer with the Alberta Ministry of the Environment, was selected by the Indonesians (from a group of three qualified candidates presented to KLH by EMDI, the Project's usual mode of operation) to continue the work in environmental quality standards, starting early in 1989. Mr. Nagendran was the right person with the right skills at the right place and at the right time. Mr. Nagendran was to serve the needs of both Assistant Minister 2 (ambient standards) and Assistant Minister 3 (effluent standards).

After less than two weeks in Indonesia, Mr. Nagendran was carried off to East Java by the new Assistant Minister 3, Nabel Makarim, without even a good idea of what was expected of him. Assistant Minister 3 had been contemplating strategies for handling pollution due to industrial discharges into surface water bodies, and knew he had an ideal case study in East Java with major industrial pollution problems in the Brantas River at Surabaya. He also had Vice-Governor Trimaryono S.H., the participant in the earlier EMDI Technical Mission, dedicated to doing something about the problem. Mr. Nagendran's immediate assignment was to take the information of river flows and effluent loadings provided to him by the Vice-Governor's office, and advise the Vice-Governor's staff on how best to approach industrial pollution management and control on the lower Brantas. As a start, Mr. Nagendran was asked particularly to assist with a difficult decision regarding the possible closure of a sugar mill which employed 3500 workers, but which was discharging a pulp effluent which was having a dismal effect on the water quality of the river which was used, downstream, by many other industries, agriculture, and for all municipal drinking water and sewage disposal purposes. The effect was especially problematic during the dry season when water flows were low. His work with KLH resulted in the eventual development of the *Program Kali Bersih*, the River Cleanup Program, or PROKASIH (Nagendran and Makarim 1991).

The development of PROKASIH represented the next step in the development of the BAPEDAL. Improved effluent discharge standards were developed for fourteen Indonesian industrial sectors. Both the new standards and the PROKASIH Program were announced on Environment Day, June 5, 1989, by President Suharto and Minister Salim. In order to make the PROKASIH Program manageable (learning from the AMDAL experience), eight provinces, 20 priority rivers, and 14 industry sectors were initially included in the Program. Subsequently, it has been expanded in all three aspects, with ambitious plans to include all provinces and rivers in Indonesia by the end of this century. Another high profile Technical Mission including the Vice-Governors of most of the eight initial provinces came to Canada in

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November 1989, visiting various water pollution clean-up programs in Nova Scotia, Quebec, Ontario, Alberta and British Columbia. The group returned to Indonesia inspired, and the program has never looked back. A prize is awarded each year on Environment Day to the province that makes the most progress with its PROKASIH Program.

PROKASIH had three fundamentally important effects on KLH and Indonesia in 1989:

- reinforcement of the desire to develop some form of environmental management implementing agency;
- the clear identification of the entry points for operationalizing pollution control and other operational aspects of environmental management at the provincial level, namely through the Offices of the provincial Vice-Governors and with the Vice-Governors themselves; and
- the generation of enormous donor agency interest, with donors eventually agreeing to develop programs for specific provinces and rivers to assist with river industrial pollution clean-ups.

The Dalhousie EMDI managers and, to a lesser extent, the advisors, engage in a significant amount of informal "donor coordination"

This latter point is a good illustration of a rather unique role that EMDI has played in Indonesia. The Dalhousie EMDI managers and, to a lesser extent, the advisors, engage in a significant amount of informal "donor coordination" by acting as information sources on what KLH is doing and is interested in, and how this fits in with what other donors are doing in environmental management with KLH and with other Indonesian organizations and agencies. This process was especially well developed under the EMDI 2 Dalhousie Project Leader Jakarta, George Greene.

Following the successful initiation of PROKASIH, the interests of Bpk. Nabel, Assistant Minister 3, turned to the possibility of establishing a "for real" pollution control agency that could operate effectively at both the national and the provincial levels. Initial studies of this concept had been supported by EMDI as early as 1988 and were reinforced by the work of other EMDI advisors in 1990. Important international development agency interests were also evident, specifically from Japan and the World Bank. KLH and the Government of Indonesia could not afford to put in place an organization as complex or as costly as a Pollution Control Board without external funding.

The mandate of the potential agency was extended to include environmental assessment; in other words, any existing environmental management or regulatory system that required operationalization at the central and provincial levels. Some concerns were expressed by EMDI and Dalhousie University at separating especially environmental assessment from spatial planning, since each is so dependent on the

other. However, KLH made its decision on the basis of what was operational at the time. The establishment of BAPEDAL was announced on Environment Day, 1990, with Minister Salim in overall charge. As of March 1993, BAPEDAL is very much a going concern, with nearly 200 employees, and growing in experience and competence as time goes on.

Marine and Coastal Ecosystems Management

The marine and coastal component was a new component in EMDI Phase 3. The roots for this effort go back, at least indirectly, to Canada's efforts in the Third United Nations Conference on the Law of the Sea related negotiations (1973-1982). Several senior Indonesians participated in those negotiations, including Ambassador Djalal, who then became Ambassador to Canada at the time that Arthur Hanson and his staff were developing and implementing EMDI Phase 1. Dr. Hanson shared Dr. Djalal's interests in marine and coastal matters. CIDA became interested, as the CIDA staff identified this as an area of Canadian comparative advantage, and CIDA undertook a Technical Mission to Indonesia in 1986-87 to assess the possibilities of work in this area. This was followed up by a planning exercise in marine and coastal developments for the national economic development agency, BAPPENAS, as a contribution to the BAPPENAS five year development plan. BAPPENAS concluded that it was better to experiment with working with one cross-sectoral and cross-jurisdictional agency, Environment, rather than taking on two at once, since the marine and coastal "sector" had the same transectoral and transjurisdictional characteristics.

CIDA was disappointed with this, but demonstrated continuing interest by funding the marine and coastal activities designed for EMDI Phase 3. These were given a moderately high priority by KLH, but without CIDA's particular interest, they might not have made it through the final EMDI 3 design process. For KLH, it was new area, which the Ministry is now strongly committed to and one in which, with EMDI assistance, it has made considerable progress. It was a fortuitous set of circumstances that resulted in its inclusion.

The first advisor in marine and coastal management and conservation was Dr. Tomas Tomascik who had been a Junior EMDI advisor with the Study Centre at Dipnogoro University in Semarang, Central Java during EMDI 2.

An important breakthrough came when Dr. Tomascik was asked to help evaluate an environmental assessment of a new tambak development, or aquaculture fish ponds, in land just behind an important marine turtles nesting beach which was a designated conservation area. This opened up the whole area of marine turtle conservation in a country where marine turtles are still harvested as human food. Two endangered species are also involved. How many coastal "developments" and how

The marine and coastal component was a new component in EMDI Phase 3.

This opened up the whole area of marine turtle conservation in a country where marine turtles are still harvested as human food.

much harvesting by humans could Indonesia's marine turtle populations stand? This eventually led to an extensive public education program on the importance of marine turtles, and the desirability of not only conserving the several species involved, but enhancing the opportunities for the various species to reproduce and increase in numbers. This work brought Dr. Tomascik and his counterpart into contact with the conservation group in the Department of Forestry, who were responsible for parks and protected areas.

These contacts with the Conservation group in the Department of Forestry led to an even larger initiative.

These contacts with the Conservation group in the Department of Forestry led to an even larger initiative. At the time, Indonesia had no sports diving clubs which systematically recorded undersea information, or other means to assess the value and health of the coral reef, seagrass bed, and mangrove communities along the coasts. Dr. Tomascik was at one point asked to investigate a large reef complex in the islands between Indonesia and South Sulawesi called Take Bone Rata; this was judged to have high potential as a marine national park. A marine parks planning adviser has since been brought in by EMDI to map the resources of the shallow seas in the area, assess the potential for designating this area an underwater park (it has high potential), and develop and locate use zones in order to protect those areas of pristine populations with other unique and special characteristics as scientific reserves; less unique ones are designated as tourism reserves, traditional fishing zones, etc.

EMDI publishes major reports written by EMDI participants.

EMDI publishes major reports written by EMDI participants. An influential one is on mangrove economics, written by Dr. Jack Ruitenbeek, a Canadian ecological economist (Ruitenbeek 1991). This study was commissioned by Assistant Minister 2 Aca Sugandi; he wanted information on the economic values of standing populations of mangroves. The question had been raised through a licensed Japanese development in Irian Jaya where the concessionaire was coming dangerously close to a very large mangrove forest reserve with its wood chipping operation. As part of the study, three types of mangrove stands were evaluated: those that were present as remnants only following tambak or other coastal development (West Java); those still abundant but under considerable pressure from competing tambak development (Southeast Sulawesi); and the large virgin stand in the mangrove reserve that could be encroached upon by the wood chipping operation (Bintuni Bay in Irian Jaya).

The mangrove economics study represented one of the few times that EMDI had the opportunity to work at the grass roots level on a KLH assignment.

Following extensive data collection at the grass roots level, extended cost-benefit analytical techniques were used. Important sustainable development recommendations resulted. The mangrove economics study represented one of the few times that EMDI had the opportunity to work at the grass roots level on a KLH assignment.

Work will soon begin in marine water quality standards, marine beaches and pollution control, and other environmental management aspects associated with marine ports and terminals. However, it was the marine

ecosystems, parks, and conservation considerations that have taken EMDI into these areas of new and challenging interest.

Ecology of Indonesia Series: EMDI Report Series

In the early pre-EMDI period of work in Indonesia on Dr. Hanson's small development projects, he and one of the individuals he had working with him, Dr. Anthony Whitten, concluded it would be extremely useful to develop a series of books on the ecology of Indonesia. The immediate need was for modern ecological materials for use in universities at the undergraduate and graduate levels in Bahasa Indonesia as well as English. However, it was recognized that there was a much larger body of potential users for such a series, including Indonesian planners and all engaged in any aspect of environmental management in Indonesia. For the English version, the users would include a number of Indonesians who prefer to do their ecological reading in English, donor agencies, consultants and external private sector companies working in Indonesia and needing to do such things as AMDAL processes, and ecotourists. An important and less expected market has been universities world-wide needing tropical ecology texts for teaching about the global environment.

Six of the seven books will have been completed under EMDI. Each book is published in English and Bahasa Indonesia editions. The titles are:

- The Ecology of Sumatra;
- The Ecology of Sulawesi;
- The Ecology of Kalimantan;
- The Ecology of Java and Bali;
- The Ecology of the Moluccas and Lesser Sundas;
- The Ecology of Irian Jaya; and
- The Ecology of the Indonesian Seas.

Two of the books are already published, the third will be out in less than a year, and the remaining books are scheduled to have been published by 1996.

Dr. Whitten is the senior author of three of the books; Dr. Tomascik is doing the Indonesian Seas, Dr. Kathleen MacKinnon has done Kalimantan; Dr. Kathryn Monk is doing the Molluccas and Lesser Sundas, and Dr. Adrian Forsyth is doing Irian Jaya under a joint funding arrangement between EMDI and Conservation International. Each book has Indonesian co-authors as well as additional contributors. The book series has been a special commitment of Dalhousie University, Minister Salim, and Dr. Koesnadi, the former Executive Secretary (SESMEN) of KLH, the drafter of the Environmental Management Act of 1982 and much of Indonesia's other environmental legislation, and former Rektor of Gadjah Mada University. Its management is an arduous task, as Barbara Patton, the School for Resource and

Two of the books are already published, the third will be out in less than a year, and the remaining books are scheduled to have been published by 1996.

Environmental Studies International Projects Information Officer and Books Coordinator well knows, but it will be worth it in the end.

NGOs

A modest level of work has been carried out with environmental non-government organizations in Indonesia.

A modest level of work has been carried out with environmental non-government organizations in Indonesia by EMDI from its early beginnings. Minister Salim and several of his senior staff early on recognized the roles that NGOs play in environmental management, with important functions in advocacy, and as "doers" in conservation, preservation and various other environmental restoration and enhancement activities. Furthermore, the senior KLH staff had been student activists themselves, and recognized the value of harnessing the young and committed to the causes of environmental management and sustainable development.

The main body of EMDI-supported NGO work has been done with WALHI, the Indonesian umbrella organization that coordinates and assists more than 400 local environmental NGOs. Capacity building and subsidies for training courses have been the main targets. An effort was made in EMDI Phase 2 to establish a linkage with a pair of Canadian NGOs, but for a number of reasons the linkage was not sustainable. However, the main Canadian NGO, Pollution Probe, learned a great deal about what developing countries were like, what they had to work with, and what they were up against. This broadening of a major Canadian NGO's perspectives on the world has been beneficial in its own right.

"There is a big wind in my courtyard, but I will be all right."

WALHI achieved a special profile when, as part of an attempt to win a pollution enforcement case, it took KLH to court. This was ironic, since KLH provides a small subsidy to WALHI for the valuable functions it performs for Indonesia, and it is frequently called upon by KLH for consultations. However, KLH was basically in favour of the court action, since there was a great need to establish a body of environmental legal decisions for case reference purposes. It was a tense time for WALHI. Meeting with the WALHI President of that time on another matter, two of us inquired, with some concern, how things were going. The answer was pure Indonesian and unforgettable: "There is a big wind in my courtyard, but I will be all right." Shortly after that, an arrangement was made for him to take a graduate degree at one of the Boston universities, and for WALHI to have a new President. However, there will undoubtedly be a place for him when he returns to Indonesia.

EMDI has worked with a few other NGOs, but basically only when EMDI participants have the opportunity to work "on the ground" as opposed to in the capital city region directly with KLH.

There is one extremely important factor relative to environmental NGOs in Indonesia that should be noted. Several senior KLH staff have

discoursed on the fact that environmental advocacy NGOs are one of the "safe" places that one can be a student activist in Indonesia. Environmental advocacy is seen as a positive benefit to Indonesia, and KLH can foster it, within reasonable limits. Environmental NGOs are seen as a primary breeding ground for Indonesian democratization in the most positive sense, as well as a prime training ground for future leaders and influentials.

Fellowship Program

Human resource development (HRD) has been a primary EMDI objective since its beginnings. While this takes many forms, and permeates most of what EMDI does, the graduate Fellowship program is the most formalized of the EMDI HRD initiatives. Much has been learned since the first intake of students arrived on the Dalhousie University campus in 1984 about selection processes, the requirements for English language capability, the special needs of law students, the importance of a good match between student and advisor, the usefulness of supplementing the student's application with a research proposal written by him/her, how the presence of family in Canada leads to better and more efficient student performance, and the general needs of the Indonesian students for care, support, and interest on the part of their EMDI handlers. The latter is easy to do, since virtually all the students become "special people" for the EMDI Canadian staff charged with their care and safekeeping while in Canada.

Human resource development has been a primary EMDI objective since its beginnings.

The students are drawn from KLH and BAPEDAL, the Environmental Study Centres, and the NGOs. Interest has been expressed by private sector participants in the interns program, but that has not been responded to positively by KLH, which manages the recruiting and selection processes, the latter with EMDI guidance. To date, 50 students have received or will receive Canadian graduate degrees. Students study in universities across Canada, in whichever university best meets their individual needs and will accept them. It is a satisfaction to see some of the returned EMDI students already playing active roles in the progress of environmental management in government, in law, in the NGOs, in "think tanks", and in the universities in Indonesia.

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Dalhousie University Program

As EMDI Phase 2 neared its completion and planning for Phase 3 was being discussed, a persistent undercurrent was detected at Dalhousie University: all this assistance to Indonesia is great, but what, besides a modest overhead, is in this for Dalhousie? Where are the academic exchanges, and where is the realization of "home grown" academic values? This was especially strong in SRES amongst the non-participating faculty in EMDI. With some hesitation, and as the design for EMDI Phase 3 got larger and larger, the design for the "Dalhousie University Program" was put forward by the author to CIDA and KLH.

The suggestion was met with understanding by both of the other Partners, and \$1.1 million was dedicated for this purpose.

The Dalhousie Program contains three units.

The Dalhousie Program contains three units:

- the academic program which includes faculty exchanges and research opportunities in both directions; support for Canadian students to do thesis work in Indonesia; and a Women in Development program;
- support to the services, the building of the Southeast Asia Environmental Collection, and the cataloguing of the Collection holdings into the Dalhousie Library system and into NovaNet, so that the Collection is accessible electronically world-wide;
- support for workshops and conferences, of which the international University Action for Sustainable Development Conference held in Halifax in December 1991 is the main example; and
- support for project analysis; the two main activities here were the development of the EMDI 3 evaluation methodology (Poel and Boase 1991) and the author's future book about EMDI.

This program has had a salutary and beneficial effect broadly across Dalhousie campus. A small number of SRES students have done thesis work in Indonesia, joined by a larger number of other Dalhousie students from a broad range of disciplines. Some excellent and innovative faculty research programs have been carried out in both directions, Indonesians to Dalhousie, and Dalhousie faculty to Indonesia. The EMDI Project was used as the main case study by the combined Management Organization and Introductory Public Administration courses in the Faculty of Management in academic year 1991/92, and included a work period in Indonesia for seven student representatives. The joint project course in SRES will spend three weeks in Sumatra in 1993 as part of the class exercise involving, as well, one of the Indonesian faculty exchanges. One interesting factor was noted: it was necessary for the EMDI staff to be proactive in getting the program started. Both Dalhousie student and faculty participants initially had to be sought out. Once the program was well underway, people came voluntarily. Initiation, however, required considerable work on the part of the EMDI managers, especially Dr. Joan Campbell.

The value of the Southeast Asia Environmental Collection to the EMDI Project has been mentioned several times already. However, EMDI advisers and staff are by no means the only users. Initially the main users were Dalhousie University staff and students who knew about the Collection. Once the main holdings were catalogued into the University system and into NovaNet, usage shot up many times over. The main users are academics from Nova Scotia and across Canada, but it has also been a valuable resource for private sector users who are developing proposals or working on projects in Southeast Asia, for CIDA people, and for visitors from other donor agencies such as the World Bank and the German international development cooperation agency, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ).

The value of the Southeast Asia Environmental Collection to the EMDI Project has been mentioned several times already. However, EMDI advisers and staff are by no means the only users.

In order to ensure the perpetual use of the Southeast Asia Environmental Collection holdings, an arrangement was made with the Dalhousie Library that the Collection would be housed at SRES as long as the projects or other sources could support it, and there was sufficient room. However, if funds are no longer available, it will be integrated into the main Dalhousie Library holdings, thus ensuring its sustainability, if not its continued focused growth.

III. The Environment and Resource Management Project in the Philippines

Brief History

The Environment and Resource Management Philippines Project (ERMPP) was born in the ferment just following the "EDSA Revolution", the peaceful demonstration by thousands of Philippines citizens that turned back, without bloodshed, the army and police ordered to enforce the maintenance in power of former President Marcos, when he attempted to deny the democratic election of Corazon Aquino as President of the Philippines in February 1986. This was one of the most hopeful and inspiring events in the recent history of "people power" interventions. Canada demonstrated approval for the new regime by instituting a Philippines Desk in CIDA; development assistance had not been provided to the former regime.

The Project itself came about through one of those combinations of unrelated circumstances that sometimes result in things happening. In 1986, Arthur Hanson, then the Director of SRES and the EMDI Project, sat next to an old Ford Foundation colleague on a flight to Manila, where he was informed that the Ford Foundation had completed its assistance to the Program for Environmental Science and Management at the University of the Philippines at Los Banos (UPLB). UPLB was in the process of converting this program to the Institute of Environmental Science and Management (IESAM), creating a potentially sustainable, though new and weak, institution. Clearly, this SRES-counterpart institution would benefit from further support.

Second, one of the faculty members of the new IESAM approached a newly arrived CIDA officer to determine whether Canada would fund fellowships in support of IESAM's new master's degree program. The answer was no, not directly; a Canadian Partner needed to be involved, and in a rather different way. Third, CIDA was intrigued with the direction the EMDI Project was taking, starting first with a focus on universities and then growing into support of a central government agency. Might this pattern be repeated again in the Philippines? As the new Philippines Government was very new and on very uncertain ground, it seemed best to start with investments in the university system which would always be a positive force in the country's development and governance, no matter what directions the country might take politically. The Project's future could then unfold in its own way, in concert with positive developments in the Philippines.

Three Dalhousie University faculty members undertook an exploratory mission to the University of the Philippines in 1986.

Three Dalhousie University faculty members (Arthur Hanson, Gordon Beanlands and Ian McAllister) undertook an exploratory mission to the University of the Philippines (Manila and Los Baños campuses) in 1986. A return visit by UPLB faculty to Dalhousie followed. The resulting outline and first draft of a proposal contained the five technical elements that remain in the final design: an academic program; demonstration projects; policy development assistance; environmental extension and outreach; and development of environmental information systems. At that point, project development languished, largely because SRES did not have the capacity to take on substantial new commitments. The EMDI management staff had been hired to manage EMDI, and had their hands more than full with the explosive demands and development of that Project. SRES was given a bit of breathing space by the a major World Bank study on the Philippines focusing on resource status and development in forests, fisheries and agriculture. CIDA participated in this study and determined that it should be completed before funding any Dalhousie University-UPLB relationship in environment and resource management.

Gordon Beanlands, by then the Director of SRES, revised the proposal in light of the World Bank findings and subsequent events in the Philippines. CIDA financed a return visit to Dalhousie by Dr. Chona Cruz of IESAM in November 1988 and a project development working team was struck which included Dr. Tania Li and the author. It was determined to take the same approach as with the planning of EMDI Phase 3: the "proposal" would be written in the form of a CIDA Project Management Plan. This was submitted to CIDA in February, 1989. CIDA then had to finalize the Management Plan with Dalhousie and UPLB, and convert it into a Contribution Agreement between Dalhousie and CIDA. To do this, key members of the IESAM team were brought to Dalhousie University in September 1989, along with the CIDA project team, including the financial negotiators and Contribution Agreement drafters.

ERMPP Phase 1

The Environment and Resource Management Philippines Project was signed into existence on November 7, 1989 as one of the "official events" during the visit of President Aquino to Canada. On the basis of CIDA's commitment, Dalhousie had already advertised nationally for the ERMPP Canadian Team Leader in the Philippines, with environment, resource management and project management experience being key criteria. Mr. Peter Guy, an environmental consultant with Monenco, was selected for the position by the Selection Committee (which included an IESAM representative). Ms. Jennifer Leith was transferred from the EMDI Project staff to become the ERMPP Assistant Team Leader based at Dalhousie. The author was appointed ERMPP Project Director at the same time. Mr. Guy and his family were deployed to the Philippines in January 1990, getting this four year Project off to a prompt start.

The ERMPP Project, like the EMDI Project, is an institution-strengthening, capacity building, human resource development Project. Its objectives bear a lot of similarity to EMDI's, but since each is institution-specific, the scope of the ERMPP objectives is considerably smaller than that of EMDI even at the Projects' most comparable funding levels, ERMPP Phase 1 and EMDI Phase 2. The ERMPP Phase 1 objectives are:

- undertake institution strengthening and improvement of the environment and resource management capabilities of IESAM and other targeted agencies, through joint implementation of the Project by Dalhousie University (through the School for Resource and Environmental Studies) and the University of the Philippines at Los Bãnos (through the Institute of Environmental Science and Management);
- use the Project to support the Government of the Philippines (GOP) environment sector plans and programs, including assistance with policy development, provision of training programs for government field personnel (human resource development), and enhancement and use of IESAM's information and data base for these purposes;
- develop an on-going mutually beneficial linkage between UPLB and Dalhousie, through the joint efforts of IESAM and SRES in the implementation of this Project.

As indicated above, ERMPP had five technical assistance components:

- human resource development through education and training programs in environment and resource

The Environment and Resource Management Philippines Project was signed into existence on November 7, 1989.

The ERMPP Phase 1 objectives are: undertake institution strengthen-ing; support the Government of the Philippines environment sector plans and programs; and develop an on-going linkage between UPLB and Dalhousie.

ERMPP had five technical assistance components.

management. This consisted of graduate fellowships for Filipinos for degrees or internships in Canada or the Philippines; faculty exchanges in both directions; faculty research fellowships for Filipino faculty in Canada; and short intensive training courses in the Philippines in environmental assessment and rapid rural appraisal;

- development and implementation of action programs, including environment and resource management and community-based analysis and assistance, opportunities were created here for both Canadian and Filipino graduate students to do thesis field studies;
- environment and resource management policy development to assist government policy decision-making and implementation. A key mechanism here was the early formation of a Policy Advisory Committee with senior representatives of key GOP environment and resource management departments to identify areas where policy assistance was desired, and to receive the results of the ERMPP policy studies and recommendations;
- environment and resource management extension education involving regional education institutions and environmental NGOs through the Environmental Education Network of the Philippines (EENP) and field personnel of key government environmental agencies, mainly the Department of Environment and Natural Resources;
- development of environmental information management systems. These came to include computer-based data base management, the IESAM library, assistance to the IESAM Bulletin, and the ERMPP publications program, ERMPP also makes contributions to, and receives support from, the Southeast Asia Environmental Collection at SRES.

There are many similarities between the Philippines and Indonesia as countries, but also important differences.

There are many similarities between the Philippines and Indonesia as countries, but also important differences. At the inception of ERMPP Phase 1 in 1989, the Philippines had recently been through the equivalent of a revolution; the Philippine Government was threatened by a series of attempted coups which made the political situation uncertain if not unstable. Many Philippine resources were in a much greater state of over-exploitation and depletion than in Indonesia, suggesting stark questions of non-sustainable development. Power, land and resources were concentrated in a much smaller proportion of elites in the Philippines, with resulting landlessness and poverty being more widespread throughout the population than in Indonesia. "The Insurgency" was consequently a very real factor in the Philippines; and

because of the dominant religion of the country, a high birth rate with little opportunity for family planning was a cause for considerable concern. On top of all of this, the Philippines is subject each year to a series of powerful typhoons (which Indonesia is generally not), and has had to bear devastating earthquakes (Baguio, Pinatubo) and volcanic eruptions (Penatubo and Mayon) during the first three and one half years that the Project has been in operation. Another factor that impacts on Philippines productivity is daily power "brown-outs"; power generation facilities are insufficient for the country's needs, so power is "rationed" by removing services on a daily rotating basis amongst all users.

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Both because of, and in spite of, all of the above, ERMPP has made considerable progress in its brief life. Phase 2 is currently in the planning and negotiation stages. CIDA's capacities for future support are not yet known. It would be useful to examine some of the highlights of ERMPP Phase 1 to date to understand the enthusiasm of the Partners for further joint work.

ERMPP Highlights

In what follows, it is important to recognize certain factors that have shaped ERMP Project implementation. The University of the Philippines is made up of five geographically separated units. The University of the Philippines at Los Baños is the agricultural and forestry unit of the UP system, which naturally determines the nature of its faculty, academic programs, and research foci. In some ways, Dalhousie University has more affinities with UP Diliman in Metro Manila with its professional schools, marine lab, and pollution management and regulatory interests than with UPLB, although the structure, size, and make-up of SRES and IESAM are otherwise very comparable. This factor has had an effect on the placement of both Filipino Fellowship students studying in Canada (only the law students have found an academic home at Dalhousie), and the UPLB Faculty Research Fellowship holders, most of whom have spent some time at Dalhousie, but have also traveled to other locations to round out their programs. The Dalhousie faculty and student exchanges were rather slow off the mark initially, but innovative and proactive efforts by the Assistant Team Leader at Dalhousie ultimately resulted in faculty exchanges which included Sociology, Social Anthropology, Environmental Law, and International Business. Student theses covered a broad range of topics, and the program included students from SRES, elsewhere in Dalhousie, and one each from St. Mary's University and the Technical University of Nova Scotia. The creation of law internships regarding indigenous peoples and resource management for Dalhousie law students was another productive innovation.

The University of the Philippines at Los Baños is the agricultural and forestry unit of the UP system.

The UP system is a prime recruiting ground for Philippine Government senior civil servants. UPLB products are concentrated in the Department of Environment and Natural Resources, Department of Agriculture, Department of Agrarian Reform, and the National

Economic and Development Agency. This makes UPLB's, and therefore ERMPP's, participation in policy assistance both easily accessible and a reality. Physically, UPLB is well placed relative to Metro Manila and Central Luzon, so it was easy to have IESAM designated a National Training Centre once the programme with Dalhousie had assisted in reinforcing its credibility and capacities.

The sense of "family" is very strong in the Philippines, which extends to relationships with colleagues within the same unit as well as students, and between employers and employees.

All of the UPLB senior faculty who are the Filipino senior managers of ERMPP and ERMPP activities in the Philippines obtained their doctorates in the United States or Europe. Thus there is the sense that their training is world class, even though the resources to support on-going research and other initiatives in the Philippines are very limited without external assistance. Philippine faculty salaries are inadequate, setting up the vicious circle of faculty having to supplement the support for themselves and their families with external consulting or other external funding sources, leaving only limited time for participation in ERMPP, in spite of all its benefits to IESAM and UPLB as institutions. The sense of "family" is very strong in the Philippines, which extends to relationships with colleagues within the same unit as well as students, and between employers and employees. These relationships tend to carry with them a sense of "beholderness", which forms an important part of the social net, but can frustrate advancement on the basis of merit, constructive critical analysis, and possibly need for change. However, such characteristics are by no means unique to the Philippines culture! Project participants are still learning how best to work together, buttressing each others' strengths and weaknesses in cross-culturally acceptable ways.

Policy Development

Unlike the experience of EMDI in Indonesia where the Project was in place for six years before it became truly useful in policy development assistance (as compared with technology transfer), ERMPP was welcomed into the policy assistance fold almost immediately.

Unlike the experience of EMDI in Indonesia where the Project was in place for six years before it became truly useful in policy development assistance (as compared with technology transfer), ERMPP was welcomed into the policy assistance fold almost immediately. This was undoubtedly due to the close connections between UPLB and the Philippines Government through sourcing of senior staff. The Policy Advisory Committee met for the first time in May 1990, within four months of the time that the Canadian Team Leader arrived in the Philippines. The Policy Advisory Committee is made up of senior representatives of the Departments of Environment and Natural Resources, Agriculture, Agrarian Reform, and the National Economic and Development Agency, other government departments as relevant, selected NGOs, the Environmental Education Network of the Philippines, UPLB, and the senior IESAM and ERMPP Canadian participants. The meetings are chaired by the UPLB Chancellor, and senior representatives from CIDA and the Canadian Embassy attend. The first meeting identified major issue areas where the Philippines Government wished for assistance. These priorities in turn defined the nature of the Development Action Programs (DAPs) described below.

Subsequent Policy Advisory Committee meetings have tracked the progress of the DAPs, and suggested other areas for policy assistance. One such was a very specific request for assistance from an experienced Canadian with the development of pesticide policies, registration and regulatory regimes, and knowledge of environmental effects. The Under-Secretary, who requested this assistance, wished to have such policies in place in the Philippines prior to the change of Government in May 1992. A senior Canadian advisor, who had just completed similar work for Agriculture Canada, was located and provided the services requested in a timely manner (Versteeg 1992). This was somewhat off the track of ERMPP's usual mode of operation (although very similar to EMDI's), which disconcerted the IESAM ERMPP managers somewhat, but coming from the level and location in the Philippines Government that it did, it was essential to respond. Senior UPLB faculty in this technical area were involved, so UPLB participated and benefited directly as well.

Other studies and activities in support of policy development include Laguna Lake Basin studies and recommendations (see below), a comprehensive examination of Community-Based Resource Management, environmental aspects and implications of the new Philippines Government Local Government Code, Community Interactions with Mining Developments, and certain aspects of Forestry Development. Recently it has been suggested that ERMPP might assist with policy studies for the new Philippine Council for Sustainable Development, an organization the development of which was committed by President Ramos at UNCED. The National Economic and Economic Agency chairs the Council Secretariat, and the Department of Environment and Natural Resources provides the Vice-Chair and other support. One of the IESAM/ERMPP senior managers was appointed an Under-Secretary for the Department of Environment and Natural Resources in 1992, so the policy development connections are, if anything, becoming even stronger. The DAPs are expected to be a rich source for policy development. In that context, the academics associated with IESAM and ERMPP must continue to recognize that:

"Research which produces scientific data without explaining its significance in policy terms is of little use to decision makers. Any applied research should be directed toward the provision of accurate information and the exposition of practical solutions to problems."

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Development Action Programs (DAPs)

Development Action Programs were developed at a Design Workshop in September 1990, following the identification of priority issue areas at the first PAC meeting. Representatives from Government, university, research institutes, NGOs, and one or two relevant development projects in the Philippines were invited to participate. The issues were examined, the desirable approach to take was outlined,

and the final product of the workshop was the identification of three programmes which would capture the priority issue areas and meet the other design criteria. The design decisions included:

- Each program should start with an Agro-Ecosystems Analysis workshop, and should work under this general methodology;
- Each programme should be an example of Community-Based Resource Management, believed to be one of the most promising means of meeting requirements for individual and community sustainability and social equity in the Philippines;
- It would be most efficient, cost-effective and informative if the ERMPP programmes hooked on to projects that were already on-going and enhanced them, rather than starting programs *de novo*. When possible, the projects/programs selected should be ones being implemented by Environmental Education Network of the Philippines member institutions;
- It would be useful to include the testing of existing GOP resource development assistance programs at the community level whenever feasible.

It would be most efficient, cost-effective and informative if the ERMPP programmes hooked on to projects that were already on-going and enhanced them, rather than starting programs de novo.

The following DAPs were selected and are in the process of implementation:

- Upland to Sea. Silliman University's programs in Bais Bay, Negros Orientale, were selected to include assistance to communities in the deforested, agriculturally degraded uplands, down the watersheds, across the fertile lowlands in commercial production (sugar cane) and processing (pollution implications), and through mangrove systems on to the commercially fished coral reefs. In other words, examination and improvement of integrated river basin management from watershed rise into the coastal seas.
- Protected Area Impacted By "Settlers". UPLB is responsible for the preservation and management of the Mt. Makiling Forest Reserve and within it, the Makiling Botanical Garden which the College of Forestry would like to develop further as a biodiversity reserve. For more than 50 years, "settlers" without tenurial rights have been invading the protected area, and have cut down about 50% of the forest, converting the land to agricultural purposes. Pressures to clear more land as well as use the forest on an open-access basis by harvesters of forest products are extreme (Caldecott 1993). UPLB is seeking ways to

UPLB is seeking ways to contain development within its present "boundaries" through various types of arrangements with the communities involved to establish an effective form of "social fencing".

contain development within its present "boundaries" through various types of arrangements with the communities involved to establish an effective form of "social fencing". This is also a major problem in other larger protected areas elsewhere in the Philippines. It is hoped that UPLB can find a model system that can be used to meet both people's needs and the desire and intention to maintain and sustain the system of national parks and other protected areas for conservation purposes in the Philippines.

The Makiling Forest Reserve is part of the larger Laguna Lake Basin ecosystem which ERMPP has studied as an integrated environment and resource management (or lack of) system. Land, water, and other resource allocation issues are paramount in this area which is part of the mega-urban region of Metro Manila. The Laguna Lake Basin problems and opportunities are described in an ERMPP Report (Sly, editor 1993).

- Central Cordillera (Ifugao) Traditional Rights. Tribal groups with traditional systems of land and resource tenure inhabit the Central Cordillera of Luzon. These traditional rights and systems, although in theory guaranteed in the Philippines Constitution, are in jeopardy since Philippine law mandates other requirements to establish rights of tenure and ownership. The problems that have ensued involve not only conflicts over rights, but also degradation of vital ecological support systems, the most dramatic example of which is that deforestation in the upper watersheds is threatening the water supplies and therefore the continuing sustainability of terraced rice cultivation systems, in the famous 2000+ year old rice terraces of Benauwe. The ERMPP DAP is located in a much smaller set of systems nearby, but is a useful pilot project for understanding these types of land, resource, and tenure interactions and problems. The current host institution is the Ifugao State College of Agriculture and Forestry; promising working relationships are also developing with the municipal government and other local institutions and communities.

A particularly interesting development was the rise of a community group on Guimaris Island which, of its own volition, wished to institute a DAP approach, and is being assisted by ERMPP to do so.

Each of the three DAPs was initiated with an Agro-Ecosystems Analysis workshop to identify known problem areas that needed action programs, and possible issue areas which required further research. A series of studies was then undertaken at each location; these studies are presently being analysed for results. The next step is the development of action programs. These must then be implemented with the communities, with the intention that the communities will be left with significantly improved means of self-sustaining livelihoods. It is recognized that less than half of this process is completed, so the DAPs will continue into the planned ERMPP Phase 2. A particularly interesting development was the rise of a community group on Guimaris Island which, of its own volition, wished to institute a DAP approach, and is being assisted by ERMPP to do so.

High expectations are placed on the DAP approach; its senior proponent at IESAM sees the DAPs as "the watershed for Community-Based Resource Management in the Philippines", and if it works in the Philippines, then elsewhere as well. As participants but still outsiders, the Canadians wonder :

- if the agenda of issues, studies, and approaches is not still too much driven by the academic researchers, and not enough by the communities themselves;
- if the degree of empathy and commitment between the communities and their interests and those of the academics is great enough that the DAPs will truly be able to meet community needs;
- if it will be possible to achieve equitable and consensual solutions to the really hard questions of land and resource allocations, when up against the realities of competition for scarce resources in the Philippines;
- if knowledge of both resource limitations and community needs in the Philippines can be used effectively for sustainable development purposes, without immediate community needs overwhelming resource sustainability; and
- if expert Philippine "community organizers" can be truly effective in realizing the final objectives to the DAPs, i.e., helping to put in place sustainable community development based on improved resource and environmental management.

The DAPs are an important experiment. It is hoped that by this means, not only will the communities be assisted, but that policy recommendations can be transferred directly from the grass roots experience to senior policy makers through ERMPP. Only time and a

great deal of effort will tell what degree of success for both objectives might be achieved, and which factors promote, and which impede, desired progress.

Training Programs

As indicated above, ERMPP assistance allowed IESAM to develop capacities to deliver short, intensive training courses designed mainly for local and regional government officials (EENP universities, NGOs and private sector representatives also attended). The environmental assessment courses included Canadian as well as Filipino faculty; the rapid rural appraisal courses were taught by Filipinos, assisted in one case by a Thai faculty member.

These training courses have filled an empty niche, and considerable expansion in this area is planned for ERMPP Phase 2. The range of courses identified is especially noteworthy: environmental assessment, rapid rural appraisal, environmental management, gender, paralegal (basic rights), environmental valuation, conflict resolution, environmental planning, environmental risk management, and other themes as the need arises. Provision of training courses in environmental management for government civil servants assigned environmental management responsibilities is a common need in both developing and developed countries. The IESAM programs assisted by ERMPP provide an interesting model as to how such capabilities can develop rapidly and generate high demand when the soil is fertile.

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IV. Needs and Choices Compared

Although there is much more involved in both the EMDI and ERMP Projects, hopefully the above has given the flavour of the two Projects. Table 1 summarizes some comparative statistics from the two Projects.

The following observations can be drawn:

- both Projects actively engage in the publication of reports; EMDI also has an ambitious book publication program underway; this is seen as an appropriate responsibility for university-based projects, although more effort should be devoted to fostering their use in teaching both in Canada and the host countries;
- both Projects have made use of Canadian and other expatriate advisors; usage is heavier and the one-on-one technology transfer mode is more developed on EMDI than on ERMP;
- both Projects have made extensive and effective use of workshops;

TABLE 1
Comparisons Between EMDI and ERMP

	EMDI PROJECT						TOTAL	ERMP PROJECT	
	PHASE 1		PHASE 2		PHASE 3			PHASE 1	
	Women	Men	Women	Men	Women	Men		Women	Men
Total budget, including additions	\$2.5 million		\$ 7.7 million		\$ 32 million			\$ 4.5 million	
Number of Books & Reports Published	2 reports		5 monographs		22 reports			4 reports	
Number of Books & Reports Planned	-		-		40 reports			6+ reports	
ACTIVITY	Women	Men	Women	Men	Women	Men	TOTAL	Women	Men
Total Number of Canadian and Expatriate Advisors	0	6	14	25	11	49	105	5	9
Local Advisors	yes	yes	yes	yes	yes	yes		yes	yes
Number of Students Studying in Canada:									
Masters	0	4	3	14	7	10	38	1	0
Doctorate	0	1	2	4	0	5	12	1	3
Total Number of Local Degree Students	-	-	-	-	-	-	-	11	8
Diploma Fellows	1	21	2	2	1	1	28	1	1
Number of Interns:									
Canadian Theses/Studies	-	-	-	-	6	2	8	3	5
Canadian Law Interns	-	-	-	-	-	-	-	1	2
Indonesian Private Sector Interns	-	-	-	-	3	11	14	-	-
Number of Faculty Exchanges and Research Fellowships:									
Canadians to Host Country	0	13	1	1	3	3	21	2	5
Host Country to Canada	0	0	0	0	2	7	9	1	1
Technical Missions Participants	0	0	2	3	3	9	17	3	6
Project Management	1	3	5	1	7	5	22	5	2

- both Projects have made significant use of indigenous advisors and other assistance, building local capacities in the process;
- both Projects have Fellowships for graduate studies for host country nationals in Canada; this program took off more rapidly in ERMPP Phase I than in EMDI; EMDI, however, was the "guinea pig" in this regard;
- the Indonesian overseas Fellowship managers preferred an emphasis on masters degrees as most appropriate for civil servants; while the Philippines overseas Fellowship managers favour doctoral degrees for individuals expected to have careers in either academe or in the senior echelons of government;
- ERMPP has provided support for a large number of in-country graduate degrees; this has proved to be a very cost-effective high-impact strategy; a similar program does not exist on EMDI;
- small numbers of Diploma Fellowships were completed on both Projects; such programs are very useful in skills training;
- Canadian students did either graduate degrees or internships linked into each Project in a variety of environment and resource management-related fields; placements for Canadian students were usually harder to arrange in Indonesia than in the Philippines; this was a reflection both of the main target institution with which each Project worked, and the in-country levels at which each Project operated;
- Faculty Research Fellowships are much easier to arrange than true teaching exchanges in either direction;
- well planned and structured Technical Missions to Canada are very effective learning opportunities for government environmental managers in EMDI, but to date have hardly been used on ERMPP, where the Faculty Research Fellowship has much more appeal; the difference is probably the nature of the institutions and individuals involved, and the purpose(s) for which they are coming;
- both Projects required substantial management teams, which is to be expected with institution strengthening, capacity building, human resource development projects which are "people intensive";

Both Projects have made significant use of indigenous advisors and other assistance, building local capacities in the process.

Faculty Research Fellowships are much easier to arrange than true teaching exchanges in either direction. Well planned and structured Technical Missions to Canada are very effective learning opportunities for government environmental managers in EMDI, but to date have hardly been used on ERMPP, where the Faculty Research Fellowship has much more appeal.

- in the Technical Assistance areas, men dominate at the senior levels; at the senior levels, the resource pool of women from which to draw tends to be much more limited; Fellowships are also dominated by men except for the local degree students in the Philippines; therefore, women in development remains an issue on both Projects.

Finally, to return again to the question of needs and choices for both EMDI and ERMP. The basic needs in environmental management are quite similar, although the Philippines natural resources may be more limited and more over-exploited to meet human commercial and basic needs than they are in Indonesia. The political systems and the degree of social unrest are somewhat different, with the Philippines generally being the "tenser" of the two countries. The choices of which groups to work with in the Total Environmental Management System of each country are different, and reflect the difference in the target organizations. Table 2 summarizes these differences.

Which of the two Projects will have the larger and more lasting impact?

Which of the two Projects will have the larger and more lasting impact? Probably EMDI, by virtue of its primary target institution, size, duration, and degree of success. This is not to belittle the contribution of ERMPP, however. In its short life, ERMPP has made substantial progress, and is working in both "safe" (Fellowships, for instance) and innovative but high risk (DAPs) areas. Each Project is targeting appropriate groups and levels of their respective Total Environmental Management Systems through their respective primary target institutions. Both Projects have limited the numbers of groups and levels that they work with, although the temptation is great always to expand, and must be guarded against to avoid spreading the available resources too thinly.

Projects of this size and complexity require professional management skills and experience, and require full time commitment from several individuals as managers both at Dalhousie, and in the host institution in the host country.

Projects of this size and complexity require professional management skills and experience, and require full time commitment from several individuals as managers both at Dalhousie, and in the host institution in the host country. They also require the vision, leadership and world view in their senior managers that ought also to characterize the best international development-interested faculty.

From Dalhousie University's point of view, were these Projects worth doing, even though, except for their founder, they had no Dalhousie University **faculty** champion, although they have had dedicated

TABLE 2
Environmental Management System Choices

Project/Characteristic	EMDI (Indonesia)	ERMP (Philippines)
Primary Institutional Target	Central Government Agency	University Institute (Graduate Studies)
Total Environmental Management Development System <u>Groups</u> Worked With		
Primary:	Central Government, Individuals	Universities, Individuals
Important:	Provincial Governments, NGOs, Private Sector, Universities	Central Government, Communities, NGOs
Minor:	Communications Media, Communities	Provincial Governments, Communication Media, Primary Schools, Private Sector
Total Environmental Management Development System <u>Levels</u> Worked With		
Primary:	Central Government; High level Civil Servants; Professionals	Universities, especially Graduate Schools; Faculty, Professionals
Important:	Provincial Governments, Central NGO, Private Sector working level, University Graduate Schools, Faculty	Central Government, Municipalities, Local Community Groups and Individuals, Central NGOs
Minor:	National Media; Local Community analysis; Local NGOs	Provincial Governments, other Central Government, other Universities, other NGOs, other Community Groups, other Faculty, other Professionals

This "disconnection" from the University academic mainstream has been a disadvantage to the managers, although not to the Projects.

Dalhousie project managers? This "disconnection" from the University academic mainstream has been a disadvantage to the managers, although not to the Projects, which have gone well, and as a side-benefit have provided opportunities for Dalhousie faculty and students well beyond those provided by the usual university-based international development projects. Knowledge and experience gained on the Projects ought to be integrated into the Dalhousie academic programs; this is occurring more effectively on ERMPP than on EMDI since the ERMPP Assistant Team Leader is co-teaching a course. SRES has determined that future project senior managers should have qualifications that would make them eligible for faculty appointments (provided University institutional barriers to such appointments can be overcome!), and that some portion of their time should be allocated to academic endeavors that feed back into the SRES core program. It will be interesting to see how this experiment develops in the future. Projects of this magnitude and degree of success ought to be done by Dalhousie for more than just a few faculty and student research opportunities, and overhead earned.

Dalhousie University has gained world-wide recognition for being able to break out of the classic university-to-university linkage mould.

In terms of Project impacts in host countries, these have been great with both EMDI and ERMP, and in the author's view, makes such Projects well worth doing. Indeed, when universities are uniquely capable of doing such projects, they have a responsibility to do so. Dalhousie University has gained world-wide recognition for being able to break out of the classic university-to-university linkage mould, especially through EMDI, to access and support the several sectors of society that are activating the Total Environmental Management Systems in their own countries. In doing so, Dalhousie has obtained Canadian and other resources not just from academe, but from the most relevant sources, be they government, private sector, academic, or NGO. This strategy would seem to have close affinities with the "National University" concept described by Kimmins (1993). That Dalhousie has been able to do this **reflects the status that universities have**, both in their own country, and in the countries the Projects work with. A wide spectrum of individuals and organizations have been willing and comfortable to work with Dalhousie, to accept the University's objectivity, commitment to "doing it as right as possible", and absence of conflicts of interest, and to trust Dalhousie to provide the necessary support for delivery of effective Projects. EMDI and ERMP have put Dalhousie University into the mainstream of international environmental management development. Can the University continue to sustain this role?

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Indonesia

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Philippines

ERMPP Report Series

- Philippines Strategy for Sustainable Development. Department of Environment and Natural Resources, Government of the Philippines.

United Nations Conference on Environment and Development. 1992.
A Report on Philippine Environment and Development. Rio de
Janeiro, Brazil.

Porter, G. and Ganapin, D. 1988. Resources, Population, and the
Philippines Future. Washington: World Resources Institute.

General

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Acronyms

BAPEDAL	Badan Pengendalian Dampak Lingkungan, the Environmental Impact Management (Control) Agency, Government of Indonesia.
BAPPENAS	Badan Perencanaan Pembangunan Nasional, the National Development Planning Agency, Government of Indonesia.
Bpk.	"Bapak", Bahasa Indonesia honorific form of address for a man. Literally means "Father". Short form is "Pak".
DAP	Development Action Program, one of the important types of activities on the ERMP Project.
EENP	Environmental Education Network of the Philippines, an organization of 22 (and growing) universities and NGOs in the Philippines, with its Secretariat at the Institute of Environmental Science and Management at the University of the Philippines at Los Banos.
EMDI	Environmental Management Development in Indonesia Project
ERMPP	Environment and Resource Management Philippines Project
GIS	Geographic Information System, a computer-based georeferenced analytical and mapping system that, at its simplest, enters environment and resource features on a scaled map, and at its most complex carries out sophisticated analysis of combinations of environment, resource, and economic factors as a decision-making tool.
GOP	Government of the Republic of the Philippines.
GTZ	Deutsche Gesellschaft fur Technische Zusammenarbeit GmbH, the German Agency for Technical Cooperation.
Ibu	Bahasa Indonesia honorific form of address for a woman. Literally means "Mother". Short form is "Bu".
IESAM	Institute of Environmental Science and Management of the University of the Philippines at Los Banos.

- KLH Menteri Negara Kependudukan dan Lingkungan Hidup, the Ministry of State for Population and Environment of the Government of Indonesia. In the change of Government in March 1993, Population and Environment have been split into different ministries, so the Ministry will become "Menteri Negara Lingkungan Hidup", or LH.
- SESMEN The Indonesian acronym for "Sekretarius Negara", the Executive Secretaries of Ministers in the Government of Indonesia. At the minimum, the SESMEN provides for and oversees the administrative services for the Minister and Ministry. At the maximum, the SESMEN may function as nearly the equivalent of a Deputy Minister in the Canadian civil service system, except that the Assistant Ministers would want to continue to report directly to the Minister, at least nominally, rather than through the SESMEN.
- SRES School for Resource and Environmental Studies of Dalhousie University.
- UPLB University of the Philippines at Los Banos, one of five units of the University of the Philippines system, and the one which specializes in agriculture and forestry, although it also provides a general university undergraduate degree.
- WID Women in Development

PART VII

**TEACHING, RESEARCH AND
COMMUNITY SERVICE**

Introduction

by Colleen O'Brien and Neeru Shrestha¹

Teaching, research and community service are three challenging responsibilities facing most university bodies: and teaching is surely at the heart. It is a process in which teachers and students share knowledge and skills in a mutually dependent manner. This is more evident as young, full-time students are slowly replaced by mature, often part-time, students and as the composition of the student body becomes increasingly international. These changes have led to an atmosphere of greater diversity and richness at Dalhousie, with even greater benefits to be had from an interactive process of education. The quality of instruction can similarly be enhanced by the experiences of instructors with international projects, although with the qualification that the limitations of human resources must be recognized. Increased student involvement in these projects may be viewed as instrumental as a result of their own participation and resultant capacity to reciprocate in the education process, and also in the consequent reduction of demands on the faculty.

Research is an integral component of a thriving university. Active research opportunities for students and faculty alike must be sought out and developed. International linkage projects and ties with the local community can enable students to participate in primary field research. Student participation in conferences as coordinators, presenters, and attendees can enhance and develop transferable skills, while the use of student research, as a resource for future classes and in the community, can contribute to student motivation, can be of very real benefit to the community and can provide students with exposure to the job market.

Students can viably act as the medium through which the skills, developed by the university, through its teaching and research processes, can be translated into practical community service. Students are valuable resources in this respect. Both the community and students can benefit from an education fused with service through such non-governmental organizations as the Red Cross and Oxfam, in community health service projects and in international development agencies like CIDA, the IDRC and developing nations' agencies. Likewise, university linkage projects can enhance their own capabilities through the utilization of students as research and training associates.

While Canadian and international students are valuable resources to any community, the international students at Dalhousie, specifically those

¹ The introduction to this section has been written jointly by Neerhu Shrestha, from Nepal, and Colleen O'Brien, from Edmonton. Both are studying in the Masters programme in Development Economics.

coming from least developed countries such as Nepal, face numerous adjustment problems ranging from simple accommodation and cultural adaptation to a number of structural and technological difficulties. The latter are exemplified in the widespread use of computers in Canada which is a virtual unknown in some nations. Equally problematic can be the adjustment to the language, the increased time-pressures in developed nations and a new system of education. For example, when students have inadequate academic preparation in their home countries, the uniform grading practices for Canadian and international students can create serious difficulties later on. These could be reduced to some extent by the provision of summer academic preparation classes, prior to the regular coursework.

Additional problems may result from the concern that the international students have over their 'individual' roles as opposed to their roles as 'ambassadors'. While a Canadian student's performance is assumed to be an individual one, there is a greater chance that the performance of an international student is taken as a general reflection of all succeeding students from that region. The existence of differential fees, foreign exchange regulations and complicated immigration procedures can also act as further obstacles to students--especially those from developing countries. These problems, it must be noted, are as likely to originate in the developing country as in Canada.

Problems apart, the many project links between the university and other nations have the potential to enable Canadian and international students to experience foreign situations first-hand and thereby help to mold career plans and to motivate further exploration in an area. For Canadian students, Dalhousie's international links, through its different projects and the presence of international students, provide the opportunity to gain far greater insights into the cultural and political atmospheres of other nations than could be derived from any book. International students bring new perspectives to a university and can transform the group dynamics within and outside the classroom. Considering the multitude of nations represented at Dalhousie, improved and regularly updated programmes, newsletters, address lists etc. could be of great benefit.

The three graduate programs - the Masters of Development Economics, the Masters of Environmental Studies and the Masters of Marine Management- as well as the undergraduate programs - the President's Leadership Class and the International Placement Program- aim at building the an informed cadre of 'change agents', equipped with interdisciplinary and international perspectives on development issues. The highly international composition of the student body, most notable in the MDE program, facilitates invaluable interface between Canadian and international students. The programs, described in the following section are oriented towards producing 'rounded' analysts and leaders, with a blend of the theoretical, policy and managerial elements needed by the future development practitioner and teacher/researcher alike.

THREE GRADUATE PROGRAMMES

Introduction

The three Dalhousie programmes discussed in this chapter (Masters of Environmental Studies, Masters in Development Economics and Masters in Marine Management) demonstrate the capacity of the university to draw together disciplines, and to enable students to acquire skills and educational experiences of direct relevance to the 'umbrella concept' of sustainable development. They also suggest a number of insights, approaches and ideas that may prove of value to both Dalhousie and other universities. Some of these points are gathered together in the chapter's conclusion.

Masters Programme in Environmental Studies: International Dimensions

by *Fay G. Cohen*

The Master of Environmental Studies Program, at the School of Resource and Environmental Studies, has a strong international outlook. Three elements in particular serve to integrate international information and perspectives: the curriculum, the composition of student body and participation by both faculty and students in SRES international programs. This discussion will provide a brief overview of each of these essential elements.

International environmental issues are a vital part of the MES curriculum. Environmental Studies 5000R, Introduction to Environmental Studies, is a required course in which all MES students participate in their first year. The general approach to the course is global, both in concepts considered and in specific topics discussed. The first term of the course provides an overview of environmental history and philosophy, ecology, and human ecology. The second term focuses on a series of topics which permit further application of the concepts considered in the first term. The topics vary from year to year, but international themes are always included. For example, course material has addressed indigenous peoples and resource issues, global change, human rights and the environment, and state of the environment reporting. Among the assigned readings in recent years have been John McCormick, Reclaiming Paradise: The Global

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Environmental Movement (1989), and the World Commission on Environment and Development, Our Common Future (1987).

MES students have many opportunities to enroll in courses with an explicit emphasis on international policy and development.

In addition, MES students have many opportunities to enroll in courses with an explicit emphasis on international policy and development in order to complete the several elective credits in their programs. MES students have enrolled in courses offered by SRES (such as ES5020, Resource Systems and Economic Development), in Economics (such as ECO5250 An Applied Course in Development Policy: Principles, Practices, Economics and the Environment), and in Sociology and Social Anthropology (SSA3060, Social Change and Development). SRES faculty often draw upon their own experiences in international development projects to enrich their classroom teaching. For example, the volumes entitled Case Studies from The Caribbean Seminar on Environmental Impact Assessment, Barbados 1985, Trinidad and Tobago 1986, (Geoghegan, 1986), developed from seminars at the University of the West Indies, have provided useful materials for MES students in Dalhousie classes.

MES students are also required to undertake independent research for a thesis.

MES students are also required to undertake independent research for a thesis and frequently the topics selected are international in scope. Approximately 20% of all theses completed since 1980 have been focused internationally, including field studies conducted in Indonesia, the Cook Islands, the West Indies, Thailand and Morocco. A sample of the titles of completed MES theses demonstrates the range of locales and topics:

Onchocerciasis control in West Africa: Ecology, risk and settlement.
Segbedzi W. Norgbey. 1984

Environmental impact assessment and indigenous people: A comparative review of developments in Northern Canada and Northern Australia; Peter Wright, 1986

Use of scale-circulus spacing to detect growth-rate differences between carp, Cyprinus Carpio in farming systems in Indonesia; Andrew E.L. McNaughton, 1986

Environmental management in Uganda: The ten point programme and beyond; Leonard Ngabo-Lutaaya, 1989

Case study of changing land use in the Middle Hills of Lombok, Central Sulawesi; Lise Tonelli, 1992.

Thus in both coursework and thesis activities, MES students can be expected to gain a perspective on environmental issues that includes a keen awareness that their chosen field of study must be seen within an international context. This awareness is enhanced by guest lectures on international topics both at SRES and the Pearson Institute, by the

presence of international students enrolled in the MES program, and by the opportunities for study abroad supported by SRES International Development Programs.

SRES has been fortunate to attract students from across the world to participate in the MES program. Indonesia, Thailand, Guyana, Australia, Kenya, Uganda, Nigeria, Ghana, South Yemen, the United Kingdom, the United States, Barbados, St. Lucia, Trinidad, Argentina, and the Cook Islands have been among the countries represented. Students have been supported by a variety of sources, including the Environmental Management Development in Indonesia (EMDI) project based at SRES, the Commonwealth Foundation, Air Canada, the Rotary Foundation, and the International Centre for Ocean Development (ICOD). The SRES admissions committee has always recognized the importance of providing professional training opportunities to individuals from abroad, especially those from developing nations where the skills of MES graduates will be particularly useful.

From ten to twenty per cent of each entering MES class is comprised of international students who enrich the intellectual and social life of SRES in many ways through their perspectives as well as through their previous experiences as professionals in their home countries. The personal and professional relationships between international students and Canadian students at SRES are strong. Almost all SRES international students return home upon completing their degree. A number of Canadian graduates have also embarked on international careers. MES graduates now form a network that stretches around the world.

The third international dimension of the MES program involves the various international projects based at SRES. These projects make important contributions to the MES program. While initially their contribution was based largely on sponsoring students from Indonesia to enroll in the MES program, project involvement has expanded to include opportunities for both students and faculty to participate in overseas programs as well. EMDI has supported two Canadian students' thesis fieldwork in Indonesia and is now supporting two more. As well, the project with the Philippines has supported an MES thesis student, and has employed two recent MES graduates to work on the project in the field. SRES faculty and students are currently planning to conduct one of the required classes in the field in Indonesia in the spring of 1993. The excellent library resources at SRES also reflect the presence of the international projects. Discussions concerning additional ways of enhancing the relationship between academic programs and international projects at SRES are currently underway.

To summarize, there is a strong international component in the MES program. It seems fair to suggest that all MES students graduate with a keen awareness of the international context of environmental issues. Further, those who have chosen to emphasize international studies

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graduate with specific knowledge and specialized skills that will enhance their ability to undertake international activities in their careers as environmental professionals.

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McCormick, J. *Reclaiming Paradise: The Global Environmental Movement*, Bloomington, Indiana University Press, (1989).

World Commission on Environment and Development, *Our Common Future*, New York, Oxford University Press, (1987).

Masters Programme in Development Economics *by Ian McAllister*

The origins of this programme trace back to the linkage agreement between the Ghana Institute of Management and Public Administration and Dalhousie University's Economics Department.

The origins of this programme trace back to the linkage agreement between the Ghana Institute of Management and Public Administration (GIMPA) and Dalhousie University's Economics Department. Three circumstances triggered a report by the author, which led to the establishment of the MDE. The first 'trigger' point was recognition that 'standard' graduate economics programmes, as routinely taught through Dalhousie's economics department, did not serve to interconnect disciplines in the manner deemed desirable for students interested in working professionally in the field of development economics; the second influence was the glowing report given to the author by Rolland Djang (then Deputy Director of GIMPA — later its director) of the Williams College MDE programme; the third influence was the outcome of conversations and programme reviews by the author regarding a number of development economics programmes of other institutions — including at Williams College, Harvard, the London School of Economics, Oxford, Bradford and the Economic Development Institute of the World Bank.

Once the report had gained the support of the Economics Department, it faced the normal round of review mechanisms within Dalhousie University. These proved their value insofar as they generated a number of useful modifications to the initial design. The MDE programme was phased into the offerings of the Economics Department in 1983, a formative process which probably limited the growing pains inevitable in a new programme. As of June 1994, eighty-six students have graduated and a further twenty-six are registered in the program and are

at various stages of course work and thesis research. This excludes an anticipated intake (for September 1994) of some fifteen students.

The framework for the MDE programme was designed to provide students (joining from a number of disciplinary backgrounds) with a choice of focusing on: either the development situations of a cross-section of Third World countries, including their interface with industrial nations (particular emphasis being placed on the Canadian aid and co-operation relationships); or the regional development situations facing industrial nations, including Atlantic Canada.

The students are required to undertake a number of classes together of a 'core' nature, albeit most such classes are also open to selected graduate students from other university programmes — including the MA economics stream, MES, and emerging MMM. Additionally, depending on their particular interests and backgrounds, students of the MDE programme are required to take a number of full or half year classes from graduate programmes in other disciplines; these have included classes from the MES, MMM, MBA, law, political science, sociology, health administration, MPA, mathematics programmes, as well as — occasionally — courses in other universities in the region and elsewhere.

Normally students in the MDE are required to have a two year residency, taking seven to eight (full year) class credits, plus a thesis. Students may, however, be admitted to a one year programme option on condition that they have sufficiently advanced standings. Some 10% have taken this accelerated route. For graduates entering without any economics background (an unusual situation), a preparatory period has been recommended (and always undertaken). It should be noted that students entering in this manner have, in practice, performed well.

All MDE students have been encouraged to view their thesis research both as a way to integrate the concepts and skills obtained through their class work and also as a bridge to their next set of activities, whether employment or further graduate work. Judging from the subsequent work known to have been done by the MDE graduates, this general approach has worked well.

A number of the MDE students have worked within linked research frameworks, designed to encourage interaction between students (for academic and social support reasons), as well as to contribute to relevant fields requiring further study. Thus, for examples, in the international stream a series of theses were completed on Canadian development aid experiences in a number of countries (including India, Jamaica, Zimbabwe, Ghana, Nepal) and, in the regional development stream, regional development experiences in Nova Scotia, New Brunswick, the European Communities, and so on. Some theses have linked into Dalhousie's international development project relationships (e.g. Ghana, Zimbabwe, Indonesia) and, in one case (Nepal), the thesis

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provided helpful background to the formation of a new project link. In all the examples, the students spent time in the field and, in the case of the international theses, this frequently included visits to CIDA and IDRC offices in Ottawa, the World Bank and IMF offices in Washington, as well as the country receiving the aid funds.

Several lessons might be drawn from the MDE experience:

- a deliberate blend of Canadian and overseas students generates a good social and cultural environment; some 70% of the students have been from overseas — including India, the UK, Japan, Hong Kong, China, Indonesia, Caribbean states, Sierra Leone, Gambia, Uganda, Zimbabwe, Malawi, Ghana, Kenya, South Africa, Ethiopia, Switzerland, the Netherlands, Nepal, Fiji, Guatemala, Mexico, Brazil. Most Canadian provinces have been represented; care has been taken to encourage a reasonably balanced gender representation.
- an annual intake of at least ten and no more than fifteen, given available resources, has appeared to work well. A critical core is necessary for the overall momentum of the programme; thesis supervision, in particular, imposes constraints.
- after an initial phase, when the programme was largely built around existing courses, a number of modifications were introduced to several existing classes and also two new (half year) theory classes were added and a (half year) seminar/thesis preparation class.
- group field activities (for example visits to development projects in the region) were found to be important 'bonding' experiences for the programme participants.
- the programme rapidly gained momentum and is now quite well-known internationally: the calibre of students (many with substantial working experience before joining) is excellent — and many have come under external scholarship support (e.g. Commonwealth scholarships), CIDA assistance, sponsorships from their own institutions. As a significant contribution, CIDA made a scholarship programme available, which both helped launch the MDE in a solid manner and, from a partial review of the progress made by the students so assisted, appears to have had spectacularly successful results.

The programme rapidly gained momentum and is now quite well-known internationally.

- a network of young professionals has quite clearly emerged from this programme and many are already in senior management positions in Canada or their home nations. A next phase must include a deliberate effort to enable the group to keep in touch — through a newsletter, some update on relevant publications, and so on. Up to this point, the follow-up process has been very informal. Attention is now being given to undertaking a new 'networking' phase and will also include a deliberate linkage mechanism into the MES and MMM programme graduates.
- the programme has been enriched by the blend of international and regional development classes and interests. While students have focused on one or other theme, they have both come together in a number of classes and also visited sites in the Maritimes, which have provided invaluable Canadian perspectives for international issues and extremely useful international perspectives on Canadian problems and approaches.

A network of young professionals has quite clearly emerged from this programme.

Marine Affairs Program

by Ray Cote

The Marine Affairs Program began as a project funded by the International Centre for Ocean Development (ICOD). As the Canadian agency supporting ocean development and management in developing countries of target regions of the world, ICOD (now defunct) had called for proposals to establish a one year Diploma program in Marine Affairs. Dalhousie University was awarded the contract and work began in 1986. During the first five year period, ICOD funded programme and materials development, administration and student scholarships. Approximately ten students per year enrolled at Dalhousie, 80% from ICOD's target countries. One or two Canadians were also accepted each year.

The Marine Affairs Program began as a project funded by the International Centre for Ocean Development.

In 1989, the directors of the program, with the support of the Marine Affairs Program Advisory Committee, proposed that the degree awarded for successfully completing the program should be raised from a diploma to a master's degree. The pressure for this change in designation came in large part from graduates and from governments who were sending students to Dalhousie. Their view was that the Diploma was widely misinterpreted and failed to give due recognition of the nature and scope of the course work and expectations. It is perhaps an interesting footnote that the University responded to the needs of developing countries by upgrading the degree. Clearly, one of the lessons is ensuring one understands the needs of these countries before proceeding with programs and projects designed for their capacity building. A few changes were recommended to strengthen the program

One of the lessons is ensuring one understands the needs of these countries before proceeding with programs and projects designed for their capacity building.

of study but the argument was put forward that the program had originally been designed as a one-year Master's degree and the title of Diploma was offered because it was assumed that ICOD had thoroughly assessed the demand for such a degree before making its call for proposals and this was deemed the appropriate title.

The progress of the programme has been positively assessed both by internal committees of Dalhousie and by an external review team retained by ICOD. Experience has indicated that there may need to be an upgrading or preparatory session for a number of the students entering multi or interdisciplinary programmes from developing countries. This is especially true to provide some basic grounding in the natural sciences.

The programme is designed as a one year graduate-level course to provide students with concepts and tools allowing them to work effectively in various aspects of ocean management. It is intended to be especially valuable to students in management and coordinating positions with government and industry in the marine sector. The essence of the themes covered in the Master of Marine Management (MMM) programme is:

- The multidisciplinary nature of marine affairs;
- Ocean resource uses and conflicts;
- Approaches and tools for ocean management; and
- The importance of regional and international approaches to ocean development and management.

A core course is organized to provide students with an appropriate balance of theory and practice.

A core course is organized to provide students with an appropriate balance of theory and practice. This occurs, in part, through cooperation with area universities and training units, marine science and management specialists, ocean business interests, and fisheries and marine surveillance agencies. Independent research undertaken by students can involve study assignments with public and private sector organizations.

The key to the MMM is accessibility to a wide range of complementary courses.

The key to the MMM is accessibility to a wide range of complementary courses — to enable students to study subjects normally closed to them in a traditional university (single discipline) curriculum. The multidisciplinary mix of teaching and advisory faculty from Dalhousie, Saint Mary's University and the Technical University of Nova Scotia is considered to be an important element of the success of the MMM. The disciplines include law, environmental management, oceanography, economics, business, anthropology, geography and civil engineering.

The Marine Affairs Programme has been able to build bridges between disciplines at Dalhousie and, to some degree, between three Halifax universities. We had begun to develop linkages between the programme here and related programmes at the University of the West Indies and the University of the South Pacific and it became clear that other linkages were also possible in Africa. Unfortunately, faculty resources were spread very thinly (for example, the co-Directors only devoted 1/3 of their time to this programme as their primary appointments were elsewhere on campus). If linkages are to be developed from programmes of this kind and maintained, individuals, their units and the University must be willing to allocate time and dollars to facilitate them. As a result of recent changes at Dalhousie associated with the designation of ocean studies as an area of emphasis, the Marine Affairs Programme may be in a position further to solidify some of these linkages on campus, among Halifax universities and those of selected developing countries and regions. In many respects, this small but apparently successful programme challenges the university to accommodate change in a strategic and sustainable way.

The Marine Affairs Programme has been able to build bridges between disciplines at Dalhousie and, to some degree, between three Halifax universities.

Conclusion

by Ian McAllister

These three programmes point to future opportunities, recall quite substantial accomplishments in times of scarce resources and warrant some imaginative reinforcement.

Each programme enables the students to pursue multi-disciplinary studies, within the framework of the programme's main emphasis. Each programme is genuinely international in content, student constituency and linkages. Each programme has demonstrated considerable 'market appeal' and has accessed substantial external funds for the university. Each programme has promoted Dalhousie internationally and nationally through its graduates, many of whom are now assuming leadership positions in Canadian, other national and international organizations.

Each programme enables the students to pursue multi-disciplinary studies.

Despite the fact that some six hundred applications are now received each year for the forty or so places available in total, as a group the programmes are substantially under-resourced and ways have yet to be found to tackle this problem. One approach is for the programmes, which have so much in common as to philosophy and goals, to pool efforts in a number of ways to increase effectiveness. Such sharing could include the design of certain 'class modules' (for examples in project planning, environmental impact assessment, and regional development incorporating coastal-zone management). The sharing of 'strategic seminars', sessions on interdisciplinary research methods, field activities linked to Dalhousie's regional and international projects, and so on could equally serve as a further stimulus to the enrichment of the programmes as a whole. The expectations for, and unequal conduct of,

One approach is for the programmes, which have so much in common as to philosophy and goals, to pool efforts in a number of ways to increase effectiveness.

thesis research would appear to warrant review. For two of the programmes (MES and MDE) this work is viewed as an essential mechanism both for the integration of ideas from several disciplines and as a bridge to future careers. Certainly it imposes additional heavy loads on a small number of faculty, as well as on the students involved. Ways to streamline the process and actually to improve the experience for students could be explored — for examples, the merit of frameworks for team research programmes has much to recommend itself (for some students).

Some core classes appear essential for all programmes.

Some core classes appear essential for all programmes; that has come out clearly and, once more, some of these could probably benefit from team-teaching approaches that seek to integrate essential ideas from a number of disciplines. New classes and new approaches to teaching seem often only to have been feasible when energetic faculty members have added them to existing teaching and other responsibilities. Perhaps at the start of new programmes some 'self-sacrifice' is warranted, as a mechanism for testing commitment and enabling new approaches to be introduced. In the longer-run, however, such a situation is unwarranted and can be counter-productive for both faculty teaching quality and, of greatest importance, for the experience and education of the students.

These three programmes are at the cutting-edge of Dalhousie's international teaching activities.

These three programmes are clearly at the cutting-edge of Dalhousie's international teaching activities, within degree programme frameworks. They have proven influential both in the planting of seeds for new project linkages and as 'academic bridges' to many of the existing projects. A shared 'strategic plan' would now seem warranted to help them build on very substantial accomplishments.

20

SCIENCE POLICY AND THE NATIONAL UNIVERSITIES¹

by Warwick Kimmins

More and More Multidisciplinary Projects Challenge The College Model

Science policy among the leading nations is forcing a concentration of research activity at a selected group of universities, the National/Research Universities. The policies are generic and cross national boundaries: university--business partnerships, matching grants programmes, leveraging policies, out-housing of R and D, networks of excellence. These policies are accompanied by new political expectations for technology development and transfer which are forging a new social contract between the scientific community, business and government. As a consequence, in the G-7 countries these emerging National Universities are becoming the vehicles for national and international science policy initiatives (1,2,4).

These new expectations for the university research community are accompanied by a growing dominance of scientific research as a profession (3). In this model, research expands beyond the traditional scholarship of the academic to one of group activities carried out at a national and often international level. As a consequence, the horizons of the university scientist are expanding beyond the boundaries of the university and the traditional discipline. The professoriate and graduate students form part of a larger network of knowledge institutions that are woven into business and government. Some examples of these knowledge institutions in the Faculty of Science and Graduate Studies are: WOCE (World Ocean Circulation Experiment), JGOF (Joint Global Ocean Flux Programme), LEGS (NASA Liquid Encapsulation and Growth Solidification), SWIP (Sealworm Intervention Project), OPEN (Ocean Productivity Enhancement Network). All of these programmes have international connections and all of these examples have their Directorate at Dalhousie.

With this new model of research activity the university scientist is becoming skilled at marketing and is also highly marketable (2). This last factor, the impact of the competitive forces of the international and

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The impact of the competitive forces of the international and national market place must be recognized in the current round of institutional planning.

national market place must be recognized in the current round of institutional planning. To attract and retain the faculty and students who can meet the expectations of a Research University requires that all the conditions of employment and education be at least equal to those of our competitors. Therefore, if we choose the National Research University Model then the institutional signals must be clear. Any uncertainty, ambiguity or attempt to compromise will inevitably lead to the College Model even if that has not been the explicit choice. A presage of this event can be seen in the number of faculty resignations which has accompanied the uncertainty of our commitment over the last few years.

This description of the developments occurring in university-based science forms the context for the National/Research University model referred to in the Faculty of Science response to the Budget Advisory Committee (BAC). It answers implicitly the question posed by BAC of the feasibility of a mixed Research/College model. The Faculty of Science at Dalhousie, like others, is subdivided into departments. This common practice results in part from the need for administrative convenience but more importantly it has come in recognition over the years of one simple fact: As the knowledge we seek to extend has expanded, no individual has been capable of mastering more than a small part of it. Accordingly, our understanding of nature is packaged into units which comprise the various disciplines or subjects and these in turn are reflected in the institutional departmental structure.

Nature does not respect the disciplinary boundaries we have created and if we seek to understand natural phenomena in full depth and detail we must be prepared to bring the investigative resources of a number of disciplines to bear on their study.

Nature, however, does not respect the disciplinary boundaries we have created and if we seek to understand natural phenomena in full depth and detail we must be prepared to bring the investigative resources of a number of disciplines to bear on their study. Recent trends in research funding are consistent with this view--an increasing portion of the available money is committed to large, interdisciplinary team projects addressing those problems considered to be of the highest current priority. The Faculty of Science has responded by shifting resources and defining interdisciplinary programmes at the undergraduate, graduate and research levels. These reflect the university's two areas of special emphasis, Ocean Studies (the earth science system and environmental science) and Health Studies (neuroscience). These programmes extend into all our departments, transcending discipline boundaries at all levels, undergraduate to research.

It is in this environment that a Faculty of Science on the Research Model must exist and compete successfully. Institutions operating on the College Model will not be in a position to do so. A Faculty in which a few of the departments continue to be research departments while others do not will inevitably find that the research departments will have difficulty assembling appropriate interdisciplinary teams and these departments will see a diminishing success rate in funding competitions. For example, would OPEN, which draws on professors

from Biology, Engineering, Statistics, Oceanography and Physics, have been possible in a mixed model?

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21

THE PRESIDENT'S LEADERSHIP CLASS INTERNATIONAL PLACEMENT PROJECT

by Eric McKee

This paper describes an international service placement programme that is part of an extended undergraduate programme at Dalhousie University known as the President's Leadership Class.

The President's Leadership Class

The PLC, as it has come to be known, was initiated by Professor Anthony Richards of the University's School of Recreation, Physical and Health Education. It responded to a desire on the University's part to increase the emphasis on community service as part of the educational experience of its students. Thus, the PLC was meant to be an experimental project that exemplified the concept of "study-service", the notion that activities linking students' academic studies with opportunities to use their knowledge in the service of others would benefit both. Students' learning would thereby be consolidated and enriched, while persons or communities in need of service would receive it. The longer term objective was to produce graduates with a lifelong commitment to using their knowledge and skills for the benefit of others. For purposes of the PLC, service was conceived of in local, national and international terms, with the last being reflected in an eight month overseas placement experience in the fourth year of the programme. These placements are the focus of this paper.

The longer term objective was to produce graduates with a lifelong commitment to using their knowledge and skills for the benefit of others.

Funding for the overall PLC programme was received from the federal government through an Innovations Canada grant and the University committed itself to admitting three classes of ten students each in 1988, 1989 and 1990. The programme required five years rather than the conventional four for an undergraduate degree programme. The first year included a group living experience in a house on campus and a compulsory credit course in Service Learning. Otherwise PLC students pursued a range of academic programmes in the arts, sciences and professions --- biology, history, political science, English, physiotherapy, neuroscience, nursing, earth sciences, recreation and commerce. Extracurricular leadership and service activities and workshops were also a part of the programme, with the service focus expanding from the campus to the nearby community, and ultimately to

The programme required five years rather than the conventional four for an undergraduate degree programme.

an international setting through the fourth year international placement. Upon return to the University for their fifth year, and the final year of their undergraduate academic programmes, PLC students were expected to share what they had learned overseas and play a leadership role in the development of service learning and the involvement of other students in community service on campus.

The International Placement Programme

The fourth year international placement was a key component of the PLC and a major factor in attracting students to the programme.

From the beginning, the fourth year international placement was a key component of the PLC and a major factor in attracting students to the programme. The original conception of the international placements is described in the proposal to Innovations Canada:

"The fourth year will be devoted to working overseas in a developing country. The students will form into interdisciplinary teams. These teams will develop a project which is interdisciplinary and will serve a village or community in a third world country. For example, there may be a need for developing the concept of wellness in a community. The health professional may contribute to nutrition, family planning and the need for fresh water. The engineering student may contribute by creating an irrigation system and a source of fresh water. The biology major may be able to contribute to the increase in crop yields as well as a means to improve fish farming. The business student could then help to develop a co-operative and a means of marketing the increased yield and generating an income which would buy services from other villages."

Individual placements where PLC students could utilize knowledge they had acquired in their academic programmes as well as the service and leadership skills they had developed.

How the international placements were to be organized, managed and financed was a major preoccupation of those responsible for the PLC from 1989 onwards. By then it had become clear that the "interdisciplinary teams" concept was simply too complex to organize --- it would require a degree of co-ordination among the student participants and their disciplinary backgrounds, and with a setting in a Third World country, which was not feasible. Moreover, it probably implied an unrealistic sense of the capacity of undergraduate students to undertake useful development work. Thus, planning for the international placements focused on opportunities for individual placements where PLC students could utilize knowledge they had acquired in their academic programmes as well as the service and leadership skills they had developed through the PLC. As a university Dalhousie had substantial international involvements, through the Lester Pearson Institute for International Development and various projects in the Third World. And there was a history of sending students abroad for study at foreign universities, for fieldwork and, occasionally, as part of development projects. However, the University was not well-equipped to organize the kinds of placements which the

PLC envisaged, prepare the students for many of the practical aspects of coping with life in a range of developing countries, or oversee their experience while they were there. Thus the search for an organizational partner began and the linkage with Canadian Crossroads International (CCI) evolved.

Dalhousie University/CCI Co-operation

The PLC Management Committee set up an "overseas focus group" in March, 1989 to begin to develop details of the international placement project and to approach CCI and CIDA regarding the project. CCI was a logical partner because of its own strong volunteer philosophy and base, its emphasis on individual commitment to community service, and its experience and success at arranging and managing international placements. On the other hand, for the most part CCI was oriented to handling individual participants rather than groups, and placements were typically four months rather than the eight being sought for the PLC programme. Moreover, the number of anticipated PLC placements was equal to, or greater than, the number normally handled by CCI's Halifax local committee. Discussions between Dalhousie and CCI proceeded, and the possibility of a "linkage", as it came to be called, was considered by the CCI Board in September 1989. Originally, there was some question about whether CCI could arrange placements for all PLC students, and the issue of partnerships with other NGOs was pondered by Dalhousie, along with the question of what would be done if CCI decided that it did not wish to collaborate with Dalhousie and the PLC.

CCI was a logical partner because of its own strong volunteer philosophy.

The matter was tentatively resolved in November when the CCI Board approved a joint pilot project for one year, for up to thirteen participants, on the condition that a joint working group be established to sort out details of participant assessment, orientation activities and placement criteria, and otherwise to oversee the project's development. The project was endorsed by the local committee and CCI's Atlantic Regional Council, and CIDA funding was secured. This produced an enormous sigh of relief at Dalhousie, and the project was definitely underway!

The project was endorsed by the local committee and CCI's Atlantic Regional Council, and CIDA funding was secured.

However, the issue of CIDA funding remained to be resolved. An initial application for funding under CIDA's Youth Initiatives Programme had been submitted by the PLC Management Committee in September, 1989. It involved funding for three years (since there were three classes of students to undertake international placements), whereas YIP funding was strictly limited to one year projects. In spite of visits to Ottawa and phone calls, little encouragement from CIDA regarding prospects for the application was received. By May of 1990 CCI's commitment to the project had been increased from one year to three, and in July a second application to CIDA, this time made jointly with CCI and prepared with the help of staff at the University's Lester

Pearson Institute, was submitted. It spelled out Dalhousie and CCI's objectives for the project:

- "(a) to strengthen the participants' understanding of community development within other cultures;
- (b) to broaden their direct experience and that of the programme of which it forms a part;
- (c) to demonstrate the range of community service and its applications in different communities;
- (d) to learn to serve a community in a different culture;
- (e) to assist the PLC and the CCI programmes to achieve their goals."

In October a promise of funding for the first year of placements, to start in September 1991, was received from CIDA, and those at Dalhousie breathed another sigh of relief. In February 1991, then CIDA Vice-President Lewis Perinbam visited Dalhousie and met with a group of PLC students. This was an additional opportunity to communicate with CIDA regarding the international placement project.

Student Preparations

By September 1990, attrition had reduced the number of students planning to undertake placements the following year to seven. As agreed between Dalhousie and the CCI, they had been selected at the end of their second year in the PLC on the basis of their "successful completion of years one and two of the PLC programme, demonstrated personal responsibility and sensitivity to others, ability to work well with others, commitment to participating in orientation, fundraising, overseas placement, re-orientation, and community service elements of the programme in years three, four and five". In addition to continuing with their academic programmes, during 1990/91 members of the group prepared for their international placements through workshops that oriented them to CCI, cross-cultural communication, international development issues and matters of personal health and safety. They also attended CCI's regional orientation in February, 1991. And they engaged in fundraising, as must all Crossroaders, with the objective of raising \$2000 each. A variety of strategies were involved including raffles and a letter campaign to corporate and private sources, but the most substantial and successful was a basket project. Parents of students living in Halifax, away from home but not in residence, were contacted just prior to Christmas and final exams and given the opportunity to sponsor a "care" package consisting of fruit and other goodies to be delivered to their son or daughter, or to an international student. PLC students secured donated products from local suppliers

In addition to continuing with their academic programmes, during 1990/91 members of the group prepared for their international placements.

and assembled the baskets. The enterprise was a tremendous success, much appreciated by students and parents alike, and financially very rewarding for the PLC.

Students received word of their placements in December, 1991. Ryan Stanley was headed to China, Gail Gatchalian to Costa Rica, William Dotterer to Guyana, Rebecca Brown to St. Vincent, Brenda Hewitt to The Gambia, Karen Lee to Fiji, and Sonya Noseworthy to Mali. In May, Dalhousie President Dr. Howard Clark hosted a reception in his home to recognize this landmark in the evolution of the PLC. The students themselves then dispersed for the summer and re-assembled in Toronto in September for final pre-departure briefings with CCI, and then they were on their way. Brenda Hewitt faced a major difficulty when complications in The Gambia resulted in a decision by CCI to cancel her placement. Some speedy re-arrangements produced a placement in Swaziland instead, and she departed a week or so later.

Students received word of their placements in December, 1991.

The Students' Experience

After-the fact written accounts cannot capture more than a faint shadow of the kind of international experience the PLC students had during their placements. However, their various reports give a flavour of what they saw and did, and most important, what they learned.

Their various reports give a flavour of what they saw and did, and most important, what they learned.

Ryan Stanley, from Lower Sackville, Nova Scotia, taught English at the Foreign Affairs College in Beijing, fourteen hours a week to about seventy students, and lived in a room in the foreigners' dormitory at the College.

"A white Westerner in China learns what it feels like to be a celebrity. Every aspect of my life in Canada was the subject of endless questioning. How big was my house? What did my parents do for a living? How much did they earn? Did I own a car?

In return, I plied my students with questions, and gained insight into the lives and minds of young, urban Chinese men and women of the 1990's and watched as they struggled to keep up with the pace of the momentous changes that are straining the social fabric of their country.....

My students were keen to perfect their administrative and foreign language skills and eager to learn about Western customs in an effort to make themselves competitive. They see familiarity with Western ways of doing things as the key to cracking an increasingly tight job market.....however I realized how aware many of my students were of the dangers of Westernization. Despite their imitation of Western fashion, fascination with Western music and movies, and dreams of

I realized how aware many of my students were of the dangers of Westernization.

working for a foreign company so they can go abroad, their picture of the West is less than idealized. During...the riots in the spring in Los Angeles and other North American cities....We discussed it in class and I realized how few illusions they held. 'People in America do not treat each other equally,' one student said, with agreement from her classmates.....

The education I received about an ancient, intricate society left a deep impression on me.

As a volunteer with CCI, I was in China to participate in an exchange of cultures. The education I received about an ancient, intricate society left a deep impression on me. I also learned that cultural exchange between Westerners and non-Westerners can never take place (to appropriate a metaphor from the free-traders) on a level playing field. It seems to me that in an increasingly unipolar world, we must all examine the values in which the Earth's dominant culture is rooted and decide whether or not we would like to see those values continue to be spread."

Bill Dotterer, from Albany, New York, served as a project officer with Futures Fund, a CIDA program being executed by the Canadian Hunger Foundation.

"As a Project Officer, I met many people in both urban and rural areas and worked with them to develop project proposals which best served the needs of their communities. From drainage and irrigation improvements to school foundations, and the production of educational programming, to name only a few, I was involved in a wide array of projects, learning the technical aspects specific to each, as well as the administrative requirements for proper monitoring and reporting.....I always felt a personal stake in the projects I was working on (sometimes a very real occupational hazard) sensing accomplishment when project objectives were met, and conversely, sharing the frustration when they were not.....As a project officer, I was able to learn a little bit about an extraordinary variety of technical and non-technical aspects of development projects.

There is no question, however, that the greatest impact came from the people I lived, worked and became friends with.

There is no question, however, that the greatest impact came from the people I lived, worked and became friends with.....From welcoming me into their culture and sharing with me their knowledge, thoughts and ideas, I am now better able to perceive my own experience in my own culture.....Ultimately this cross-cultural experience has made me more aware and appreciative of the diversity of life, lifestyle, and values others hold around me."

Brenda Hewitt, from Sherbrooke, Nova Scotia, taught Biology, Chemistry and Health Education to students in Forms IV and V at Phonjwana High School in Swaziland.

"One of my first rites of passage into Swazi society was the training I received from my peer on wearing the national dress, emahiya, in a fashion appropriate for my age and marital status. I soon discovered that Swazi customs were very, very complicated and to understand them required patience and perseverance.

One of my first rites of passage into Swazi society was the training I received from my peer on wearing the national dress.

Memories of unique experiences in Swaziland remain with me I remember laughter --- the laughter of youth and of experience, of amusement and of curiosity, of joy and pride. I remember laughter of young children as I struggled to learn the art of eating maize porridge and soup with my hand, laughter of amusement as I practiced my siSwati and was corrected. Laughter of surprise and appreciation from the aged as I copied the acts of respect being performed by my friends, and laughter of my female students as I joined their traditional dance and learned the steps as they had during their preschool years. I remember, and sometimes still experience, laughter from within as I slowly realize that I have gained a greater knowledge of myself and others through immersion into this unique culture than I could have in countless years of academic study."

I remember, and sometimes still experience, laughter from within as I slowly realize that I have gained a greater knowledge of myself and others through immersion into this unique culture than I could have in countless years of academic study.

Rebecca Brown, from Scarborough, Ontario, worked on a CIDA project in the Fisheries Division in Kingstown, Saint Vincent.

"I arrived at the division during a time of change and growth. A new data collection system was being established for determining fisheries statistics (number of fishermen/boats; species of the daily catch and its weight; type of gear used, etc) which would eventually be used to develop a management conservation plan. I participated in this process by helping to establish an orientation programme for new Division staff who were hired to collect data.....(and) contributed what knowledge I had on data collection, statistical analysis and computer applications.....

.....Educationally, I could not have gained more practical experience in my field than being placed in a developing fisheries where even my limited background was useful. I actually surprised myself at times with what I knew.....and was amazed at my ability to synthesize my academic knowledge into practical applications....

Educationally, I could not have gained more practical experience in my field than being placed in a developing fisheries.

My learning, however, was not limited to just my work placement. During my time overseas, I lived within the

community and became part of it. I experienced its positive aspects and its negative, as exists in all communities. Most importantly, though, on a personal level, I learned that people are the same wherever you travel. Each person has a different personality, viewpoint, background, etc, and you will invariably make friends no matter where you are."

Gail Gatchalian, from Coxheath, Nova Scotia, worked at a variety of tasks in Costa Rica.

In the mornings, I would help out in Cen-Cinai, a health and education centre.

"In the mornings, I would help out in Cen-Cinai, a health and education centre, funded in part by the Ministry of Health, which provided day care for children aged two to five of low-income parents who had to work during the day. I assisted one of the maestras in teaching the children simple concepts, constructive games, personal hygiene, and helped to serve a nutritious lunch, usually of black beans, rice, 'picadillo' and a drink of tropical fruit and water.....In the afternoons, I volunteered as a piano teacher for the 'Etapa Basica', Costa Rica's music program for students and adults. As well, I helped to prepare some of the students for a recital in December....

I worked in an elderly home run by St. Vincent de Paul, with about twenty residents.

(After Christmas) I left the children's centre to become involved in other projects. I worked in an elderly home run by St. Vincent de Paul, with about twenty residents. Most of them had no financial support or were alone. I led group exercises, reading groups and took some of the residents for walks among other things...

I also worked with a special education teacher, helping her to conduct a census of Liberia to get an idea of the population of visually-impaired children. We did not complete the study, but she hopes to continue it. A needs assessment is sorely needed in this area, as special education teachers are in limited supply, and the few tend to concentrate in the capital of San Jose. I also assisted on her classroom of hearing impaired children, teaching writing skills, sign language, math , etc.....

My eight-month stay in Costa Rica certainly provided me with a valuable cross-cultural experience, despite thinking beforehand that it might be too 'westernized' to learn a great deal. Through my host family and work, I was exposed to many different groups within the community, and the everyday problems they must contend with. As well, through my travels, I became aware of the tremendous diversity of Costa Rica. Most importantly, the forces that are actively wearing away at this diversity (of peoples, ecosystems, and ways of life) were brought to my attention in full colour."

Beyond these "official" accounts of their experience, the students' letters tell of their travels, the people they met and things they saw, their living arrangements and the difficulties and challenges they faced. Like other Crossroaders, the PLC students lived in the communities where they worked, mostly with families. This worked well in some instances, and the students and the families with whom they lived became fast friends. In a couple of cases, the problems of the families --- themselves illustrative of stresses and difficulties in developing countries --- forced the PLC students to change their living arrangements midway through their placements. In addition, the students faced the usual array of issues that confront North Americans who spend time in developing countries ---- heat and cold, bugs, dust and dirt, earthquakes, unfamiliar food, crowding and lack of privacy, language barriers, gender role problems, personal security concerns, bureaucracy and local politics, speed of life and work, homesickness, and sometimes social isolation. A number of the PLC students were able to connect with other Crossroaders, sometimes traveling with them and deriving moral and social support. As well, the PLC students had organized themselves to correspond with each other and the office at Dalhousie University produced information packages that aimed to keep those abroad in touch with developments at home. The packages contained letters from all PLCers at Dalhousie, plus copies of campus newspapers, treats and practical items such as pencils or chalk, depending on the placement of the student involved. The President of the University had written to the Canadian missions nearest to where the students had been placed asking them to be as supportive as possible, and for the most part they were, although what could be done was very much affected by their own staffing arrangements and their proximity to the students themselves.

The PLC students' letters also reveal varying degrees of satisfaction with what they were able to accomplish in the way of service in their placements. An emphasis on service, and leadership and empowerment of others to improve their own situations, were central PLC values to which the students had been exposed for the previous three years. What they could actually accomplish was limited, of course, by the circumstances of the placements themselves. In some instances the students were confronted by the kind of cynicism and resignation, and reluctance to make change, that comes of having to live in a state of deprivation with little hope of improvement. A number reported having to cope with the lack of the most basic materials required for their tasks, and considerable initiative in making adaptations and scrounging is apparent. Others had to deal with their own impatience with the pace of work and bureaucracy, or with being relegated to an observer rather than participant status. And to some extent, PLC participants' satisfaction with the service aspect of their experience depended upon their own expectations and personalities. To some it was particularly important to be useful and to effect significant change, while others were content to do what they were given to do and make the most of the experience. Finally, some of the placements made good

The students' letters tell of their travels, the people they met and things they saw, their living arrangements and the difficulties and challenges they faced.

The President of the University had written to the Canadian missions nearest to where the students had been placed asking them to be as supportive as possible.

And to some extent, PLC participants' satisfaction with the service aspect of their experience depended upon their own expectations and personalities.

use of the knowledge and skills the students had acquired in the course of their university studies while others did not, and this, too, mattered to some students but not to others.

Return to Canada

PLC students began to return to Canada in April, 1992. The last to return was Brenda Hewitt, who chose to stay in Swaziland until August, several months longer than had been originally contemplated. All of the students returned to Dalhousie for another year of study, except for Karen Lee who decided to complete her degree at McMaster University in specialized neuroscience courses.

There were high expectations of the contribution returning students would make during their fifth year.

It is intended that during this year the students will take on significant leadership roles, both within the project and on the Dalhousie campus in general.

In the original plan for the PLC, there were high expectations of the contribution returning students would make during their fifth year.

"During this year the students will be expected to express their leadership skills by assisting with the program on campus. There is the potential for these senior students to create and host work opportunities, both summer and otherwise, for a population which extends much beyond the President's Leadership Class and university.....It is intended that during this year the students will take on significant leadership roles, both within the project and on the Dalhousie campus in general."

This "peer" support was very useful and served as the foundation for close contact between the two groups, which formerly had little in common.

These expectations were fulfilled to a considerable extent. In early September there was a re-orientation retreat in Musquodoboit Harbour, and during the fall the group was involved in hosting two Canada Crossroads, one from India and another from Guyana. PLCers stayed involved with Crossroads in other ways, too. Gail Gatchalian subsequently became the CCI Costa Rica Liaison person, and Ryan Stanley participated in the National Orientation in September and the Final Selection Committee for Halifax later in the fall. The returned PLC students assisted the third and final group of students in fundraising and other preparations for going overseas in September 1993. This "peer" support was very useful and served as the foundation for close contact between the two groups, which formerly had little in common. And the students participated in discussions on campus about the future of study/service programming at the University.

In other respects, though, the fifth year students were less involved than had been expected. Their orientation for going overseas had prepared them well for re-entry problems, but most still experienced some struggle in getting back to the day-to-day life of a student, and only gradually became re-involved with the PLC programme. Moreover, this was their graduating year for most and there were decisions and plans for the future to be made. Throughout the year the group stayed close and strong, in effect managing their own collective de-briefing,

sorting through the implications of their overseas experience, sharing ideas, in some instances questioning the service concept, and generally beginning the transition to the next stage of their lives. One of the lessons would appear to be that this last year may be more of a period of introspection than one of action, as had originally been expected.

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In the meantime, in September 1992, another group of six had departed for their placements. Julie Denton headed for Costa Rica to help in the development of conservation programs at the Mount Chirripo National Park in Monteverde. Melanie Madden went to Swaziland to assist in establishing a physiotherapy program at Good Shepherd Hospital in Siteki. Derek Power was assigned to teach English at the Foreign Affairs College in Beijing (as had Ryan Stanley the previous year). Munju Ravindra traveled to Mali to assist in the operation of a community health clinic near Bamako. Hugh Richards was off to Guyana to establish community recreation programs with the National Sports Development Council. And Kathlyn Schweyer was assigned to Swaziland where she would teach at Vuvulane High School.

And in December, 1993, the final group of PLC students received word of their overseas placements. Once again a PLC student, this time David Aikman, was going to Guyana. Jackie Stevens would travel to Cote d'Ivoire, and Joanne Fry would travel to India.

Future Plans

Like the whole of the PLC, the international placement component was an experiment and was meant to serve as a sort of prototype for an ongoing programme. In the spring of 1993, even though only the first group had completed their placements and the third group had not even begun, an evaluation was undertaken. This was done in part to learn from the experience of the first group so as to make improvements for those who were following them, and in part to decide if a further programme of international placements, to follow the PLC, should be planned and, if so, what form it should take. To accomplish this, external consultants were retained to undertake an evaluation of the programme to date from the point of view of the three major stakeholders ---- the students, Canadian Crossroads International and Dalhousie University. The evaluation was a highly participatory one, with representatives from the three groups collecting information and opinion from their "constituencies" in an organized fashion, and together sorting through and considering the results.

Like the whole of the PLC, the international placement component was an experiment and was meant to serve as a sort of prototype for an ongoing programme.

From this has emerged a tentative plan for an ongoing programme of international service placements that would be available to Dalhousie students outside the PLC context, but very much within its spirit of combining study and service. These involve a cycle of about eighteen months, starting in October with selection followed by six months of preparation, a three or four month overseas placement, and subsequent

"Being overseas had a huge impact on me personally, one I am sure will have repercussions and ongoing effects throughout my life".

service on campus and in the local community the next year. The objective would be to instill a sense of community service and allow students to link this with their studies, expand participants' understanding of other cultures, and afford them the kind of life-transforming experience that many of the PLC students had. As one remarked during the evaluation, "Being overseas had a huge impact on me personally, one I am sure will have repercussions and ongoing effects throughout my life".

Acknowledgement is given to Pearson Notes, Vol. 7, No. 1, Fall 1992, for the reproduction of quotations on pp. 355-358 of this chapter.

**FROM PROGRAMMES TO PROJECTS:
STUDENT EXPERIENCES IN
INTERNATIONAL SUSTAINABLE
DEVELOPMENT**

*by Patricia Betts, Juanita Montalvo, Jennifer Scott,
Johanne Peron, Olu Olojede, Deidre McKay,*

Introduction

by Patricia Betts

Students at Dalhousie have a variety of opportunities to participate in internationally linked activities. Some undergraduate students, majoring in a foreign language, can spend several months immersed in the language (French, German, Spanish or Russian) and culture of another country. Other undergraduates have chosen to study through exchange programmes such as the (now defunct) Stirling University/Dalhousie University exchange, and the (current) Nova Scotia/New England Universities exchange. Students can also study international and Canadian development theories and experiences in classes and programmes at both undergraduate and graduate levels. There are also many opportunities to attend international conferences and programmes sponsored by non-government organizations (NGOs). Numerous students have been able to participate in some of the development projects described within this book.

Students at Dalhousie have a variety of opportunities to participate in internationally linked activities.

Undergraduate students have been actively involved in international service programmes, (e.g. World University Service of Canada (WUSC), and Canada World Youth (CWY)), enabling them to work with colleagues from other countries — sometimes both in Canada and in the partner country. Students can participate in some of these programmes before starting their University careers or by taking time out from their studies. It is also possible to study for a BA in International Development Studies at Dalhousie, a programme which gives credit for guided overseas activities. The President's Leadership class is a further example of Dalhousie's conviction about the value of international experiences as a part of university education. It has already been discussed at some length in Chapter 21.

Many graduate programmes include opportunities for overseas studies — particularly fieldwork relevant to a thesis. In Chapter 19 the MDE,

MES and MMM programmes are discussed, and in Chapter 11, the international dimensions of the MBA.

In this Chapter, the perspectives of students who were engaged in four of the above programmes (WUSC, MDE, MES, and C.W.Y.) are described. It should be noted that these sections are extracts from longer papers, written by the students as part of their debriefings.

World University Service of Canada Experiences

Of the many students from Dalhousie who have participated in WUSC Seminar Programmes, two had the opportunity to "reflect on some of the issues confronting the countries which they visited as part of the Seminar" (A.D. Tillett, 1989). Upon returning to Canada both wrote about their experiences.¹ Each student was able to identify issues close to her own heart and has made a personal commitment to further her own education and pursue a career in the areas that she has identified as being of special importance.

The Status of Women In Zimbabwe *Juanita Montalvo*

With a charismatic smile, he picked up a Zimbabwean book entitled Independence is Not Only for One Sex.

On a hot and muggy afternoon at an international book fare in Harare, Prime Minister Robert Mugabe arrived with a horde of bodyguards. With a charismatic smile, he picked up a Zimbabwean book entitled *Independence is Not Only for One Sex*. He paused, waved the new publication at shoulder level and said with passion, "It is about time!" This type of commitment is what a Canadian expects from Mugabe, since he and many cabinet ministers declared themselves as feminists upon Zimbabwe's independence in 1980.

In reality, the practice does not always match the rhetoric.

In reality, the practice does not always match the rhetoric. When asked about the unfortunate street clean-up conducted prior to Zimbabwe's hosting of the Non-Aligned Movement Conference in 1986, women at an outdoor theatre festival eagerly and sadly told their stories. One woman talked of her sister who was unfairly and brutally arrested by the police as she walked to the corner to post a letter. The police did not believe that a woman living alone in an apartment was not a prostitute. In this same assault on women, thousands of others were similarly picked up without justification and released only upon proof of a marriage certificate.

Zimbabwe is riddled with such dichotomies.

Zimbabwe is riddled with such dichotomies, where many people in power are acutely aware of existing problems, but where, on a day to day basis, the changes seem to be painfully slow. Nevertheless, many

¹ Both of the original articles appeared in Pearson Notes Vol. 5, No. 1, Fall, 1989.

people in the country continue to work hard at improving the current status of women.

In the country, where 80% of the farmers are women and, at independence, all of the landholders were men, non-governmental organizations involve themselves in teaching women highly practical skills. The aim of this instruction is to provide self-help and self-sufficiency to women in order to allow them full participation in the nation's economic and social development. Women are taught to improve their domestic skills in such areas as hygiene, sewing and knitting. Some women are taught how to market their crafts and are given basic accounting training. In general, most organizations working in the rural areas are attempting to provide some relief to the heavy workload that women have to carry.

Most organizations working in the rural areas are attempting to provide some relief to the heavy workload that women have to carry.

On another level, women are working towards equality by pushing for legislation that will assist gender equality. The first breakthrough in their efforts was the Legal Age of Majority Act which became law in December of 1982. The law gave majority status to African women. Previously, women as minors were unable to hold contracts, own property, or be represented in their own right in a court of law. Although the law is beneficial it has been largely *assumed* that the act alone will bring automatic changes in the rights of women and hasten the achievement of equality between the sexes. This assumption, however, has not proven to be correct. Many educated women in the cities are aware of their legal rights, although they will all say that it does not mean anything for them. Some will use the system of bride price as an example. They say that although legally they could marry without a guardian's consent, a price will always be paid for the bride.

Most women are resigned to the slow pace of change inflicted by government bureaucracy on legislative change. The drafting of new Inheritance Law began in 1984, and as of 1988 it still had not been completed. According to custom, it is the man's paternal family that inherits his possessions upon his death. Among these possessions are the man's wife and children who, in some cases, are thrown out destitute. The new Inheritance Law should protect at least some women from such abuses.

Similarly, women have been calling for changes in the system of taxation and allocation of land. Employed women are taxed significantly more if they are married — assuming that the male is the principal breadwinner. The current allocation of land is also discriminatory. Communal lands are assigned to male heads of households even though 80% of Zimbabwean farmers are women. Although women continue to articulate their concerns, changes in these practices are not foreseen in the near future. The legal changes are slow and virtually useless in changing attitudes within each household, and it is at the household level that real changes for women must occur.

Zimbabwe provides a case study for those interested in the subject of women in development.

Zimbabwe provides a case study for those interested in the subject of women in development. It is a country with many projects aimed at improving the conditions of women and with many educated people attempting to move the country forward through the participation of women. The fact that the process is slow or not meeting with instant success does not diminish the value of the efforts being made.

Agriculture and the Environment in St. Vincent *Jennifer Scott*

When a farmer wants more land just north of Barouallie, he or she might simply burn an area not under cultivation, clear it, and begin to plant.

It appeared that soil erosion was not a real concern to farmers on the West coast of St. Vincent between Layou and Chateaubelair. However, it is generally known that when the rains are heavy, soil can be seen flowing down from the steeper cultivated slopes. When a farmer wants more land just north of Barouallie, he or she might simply burn an area not under cultivation, clear it, and begin to plant. Again, most of the land is on very steep slopes. When trees are removed from the hillsides run-off increases and seepage into water catchments is reduced. Although most land plots are contoured, not all are terraced or "stripped" with elephant grass ledges. Mr. Ashley Cain of the Ministry of Agriculture admitted that bananas in St. Vincent are often grown on steep slopes, and as a result "significant soil loss" is experienced. Often the erosion of soil causes the land to become less fertile. The soil that is washed away eventually flows into the ocean — clogging the polyps in the coral reefs and increasing the turbidity in the water thus allowing less sunlight to penetrate to marine plants.

After the crop was sprayed, her cousins realized they had killed many beneficial insects and predators.

Use of chemicals for agriculture is also a serious problem. A representative of the Organization for Rural Development (ORD) maintains that any intensive farming requires artificial chemical inputs. The Banana Growers Association, ORD, and the government all encourage the use of chemical inputs. Earlene Horne of the National Farmer's Union questions the use of chemicals. She said their use often puts the farmers, their land, and the consumers at risk. Ms. Horne herself shares a three-acre banana farm with cousins. Although her farming partners wanted to spray the crop with Furadan® (a pesticide), she refused to have anything to do with the spraying. After the crop was sprayed, her cousins realized they had killed many beneficial insects and predators.

The farmer's health is also threatened during spraying. Ms. Horne recognizes that more protective gear for chemical use or application should be available to farmers, but after spending so much money on chemicals the farmer may not feel he or she can afford to purchase safety wear. She said some farmers use Furadan® "half naked and without gloves". A Belmont farmer, said that when he sprays chemicals on his crops, he does not wear a mask. His only precautions: "I make sure I wash my hands afterwards," and "I don't let it (chemicals) touch me". Although the farmer's health appeared to be

good, Marlon Mills of the National Trust explained that many farmers do not realize right away that their health is at risk because the effects of contact with chemicals may be slow to appear.

One alternative for agricultural development, organic farming, is environmentally sound, has a growing market and has proven to be profitable. One Dominican family has shown that a completely organic farm on a 1.2 acre sloped plot can provide most of the needs for a family of six and also bring in a cash income. At first neighbours were skeptical about their ability to farm without using any chemicals. However this family has shown that by integrating many different crops, using natural fertilizer from pen manure, crop wastes and biogas sludge, maintaining proper planting cycles, weeding manually, terracing, carefully observing, and using common sense, they can produce 'good' food, maintain rich soil, and suffer minimum erosion. The farmer maintains that chemical fertilizers and pesticides destroy "organisms and enzymes" which make the soil poor in nutrients, thus requiring more and more chemical inputs.

One alternative for agricultural development, organic farming, is environmentally sound, has a growing market and has proven to be profitable.

Canadian World Youth Programme²

For many students the first taste of development is gained from their experiences in programmes such as Canadian World Youth (CWY). With very little in the way of background, but often with great interest in development work, young participants are plunged into an environment which is different from anything they have known in their lives and different from what they had expected. Johanne Perron explored some of these contrasts when she wrote about her experiences as a participant in a CWY group that spent a few months in India in 1984.

India Through the Eyes of an Ex-CWY Participant Johanne Peron

Despite the preparation received in the week preceding our departure, the first days in India were a shock. When we got off the plane in New Delhi even the moon seemed different, it was so huge. The heat and dampness of the air were oppressing, the smell unusual and strong. On the bus to Nehru Stadium we could see people sleeping on the lawn and cows roaming around — things we expected to see, but were now somehow more real.

Despite the preparation received in the week preceding our departure, the first days in India were a shock.

For me, a difficult aspect of living in India was the adjustment to different expectations of hygiene. The absence of refrigerators meant that left over cooked rice had to stand in the shadow overnight, and flour had to be sifted to remove bugs. Quite different from the standards I was used to! Hot baths and showers existed only in our memories. Because it requires so much work to fetch water it is precious. We

Hot baths and showers existed only in our memories.

² The original article appeared in *Pearson Notes* Vol. 5, No. 1, Fall, 1989.

simply used small buckets and poured only the necessary amount of often unheated water over ourselves.

Gender differences existed in education. The attendance of girls in primary school diminished — at each grade, but this seemed to be attributable to their families' choices rather than lack of government funding. Girls made up about half the class in the first grade of the local primary school, but in the sixth grade they were as few as one girl to six boys.

Building a school, a project with which I was involved, was itself a good development experience.

While learning about culture we saw development projects within the community. A school had been founded for Muslim women to learn skills such as toy-making in a culturally acceptable surrounding. We also visited a village built entirely with foreign aid. The intent was to rent the village out to local handicraft producers, but at the time of our visit it was still empty. Building a school, a project with which I was involved, was itself a good development experience. When we asked whether we took employment away from local people, we were told that, because of the additional cost, the school would not have been built without the CWY's programme.

CWY had its shortcomings. These included the short period of time spent in such a new environment, the numerous planned activities, some programme inflexibility, and language barriers, especially with host families. In addition there were misunderstandings concerning the objectives of the exchange; these misunderstandings were more cultural for the Indians and more development-oriented for the Canadians. All these obstacles lead to a relatively superficial understanding of the economic issues and relations and also gave us an insight into the limitations also met by specialists and development workers. Yet CWY has challenged many people's hopes for a better world. Out of the seven Canadians in my group, four are now studying international development at Trent, Toronto or Dalhousie Universities.

Cross-National Higher Education: Reflections of an African Student in Canada³ *Olu Olojede*

In those days the oil boom brought us free tuition, subsidized living accommodation and cheap food.

Compared with an average Nigerian university student at home today, my undergraduate days in Nigeria in the late 1970's were less hard. They were less hard because of the oil boom — which has now been generally and appropriately rebaptized, posthumously, as the "oil doom". Those were the years of huge revenue from Nigeria's petroleum resources until the price crash of the 1980's. In those days the oil boom brought us free tuition, subsidized living accommodation and cheap food. In addition to being easier to attain, a university degree meant a good job, a three-bedroom flat and a car.

³ The original article appeared in *Pearson Notes* Vol. 5, No. 1, Fall, 1989.

During the current economic crunch an average Nigerian student has to contend with obsolete equipment for his/her studies, skyrocketing prices of books, and the absence of government scholarships and loans to pay for the day-to-day living expenses. If one asked the students they would tell of the tragic inadequacy of everything from collapsed stomachs due to lack of food, to the uncertainty of getting a job after graduation. For them the crisis has a very immediate reality.

I find the style of teaching and student relations with professors at Dalhousie fascinating. Students are encouraged to be active interventionists in the classroom. The relationship between students and professors in Nigeria is extremely deferential on a person-to-person basis. This sometimes precludes frankness. It stifles the free flow of ideas which is necessary for the stimulation of an open intellectual atmosphere.

To me the academic environment at Dalhousie is at times too foreign particularly when aspects of the curriculum have no resemblance to the situation in Nigeria. I am left to wonder whether any single university could, by itself, fulfill the aspirations of a typical African student in his/her attempt to contribute to the social and economic development of their country. This gap may be bridged to some extent if the student is lucky enough to be enrolled in a programme where the faculty members have had international experience in developing countries.

I am left to wonder whether any single university could, by itself, fulfill the aspirations of a typical African student in his/her attempt to contribute to the social and economic development of their country.

As an African student in Canada, I suddenly find myself playing three roles. I see myself as a student, a tourist, and an ambassador. As a tourist I see and learn new things that are radically different from what I experienced in my home country. As an ambassador, the way I behave will often influence other people's opinion of Nigeria and Nigerians.

I have also come to realize that the kind of feeling you bring from your own country is a strong influence on your attitude towards Canadians. I started out with positive feelings about Canada and made many friends. Despite a broad cultural gap between Africa and Canada, there are many similarities between a student's lifestyle here and that in my home country.

The lot of an African student in Canada has never been a rosy one. The problems vary from African student to another. Those who are married, like myself, have to live in two worlds: the academic world, and the world of the family with its attendant problems. For others the problems may range from financial insecurity, the uncertainty of a student's prospects for getting a job when he or she returns home, language or accent barriers, the climate, immigration problems, and certainly not being academically well-prepared to pursue a course. All these points are frequent causes of student unhappiness and failure.

The lot of an African student in Canada has never been a rosy one.

*I am going to do all these
things and more when I
return home.*

While here I am going to loose indigenous values underpinning African cultures on the free market of ideas. Did not Ali Mazuri say that for too long we have been passive receivers, rather than active interventionists? When I go back home I am going to become a socialist, and woe to all those who cross my path. Yes I am going to fight the transnational corporations and donors who destroy our environment. I am going to do all these things and more when I return home.

Environmental Resource Management Project of the Philippines Experience

The Environmental Management Project of the Philippines (ERMP) awarded the first fellowship to a graduate student in 1991. Deidre McKay carried out her thesis work for her Masters of Environmental Studies in the Philippines from January to October, 1992.

On Field Research in the Philippines⁴ Some Personal Experiences

Deidre McKay

*With hindsight, I look back
on the hopes and plans I
carried with me and laugh.*

Expectations were the heaviest part of the baggage I brought with me to the Philippines. With hindsight, I look back on the hopes and plans I carried with me and laugh. But, at the time, heading into the unknowns of my first overseas experience, I was expecting a great deal of myself and the project that was funding my field research. Perhaps the most important lesson I learned over the course of my stay was to readjust my expectations and depend on my own skills and judgment. Valuable learning in any discipline, this approach helped me see opportunities in setbacks, deal patiently with daily hassles, and satisfy my own agenda for academic research, personal growth and fun. Overall, I had a marvelous experience and would go back in an instant! Some days, however, it took a lot of perseverance to hold on to this attitude in the face of the confusion and challenge of the experience.

Beginning my Master of Environmental Studies, I found out that the School's international projects supported student thesis research. Going overseas to do research for my master's thesis had far more appeal than sitting in the stacks of books of one of Dalhousie's libraries. I designed my academic program and thesis proposal to qualify me for one of their awards and applied for a research fellowship. Beginning with the goal of conserving biodiversity, my research interest evolved into sustainable management of tropical forest. I chose gender and its relation to forest management in communities on the margin of national economies as my focus. My question: What happens to forest management strategies of women and men as the community experiences economic change?

⁴ Upon her return Deidre McKay presented her impressions of her experience at a conference in Vancouver in late October, 1992

This fitted with the goals of the Environment and Resource Management Project — Philippines (ERMP) in an indigenous community in the Philippine uplands and they offered me funding for six months of field research.

Mine was the first award given for a Canadian student to go to the Philippines and I became the test case for project policies on support and spending. Once I had started my research, it became obvious that six months was a very unrealistic goal and my funding was extended to ten. Sometimes, I had great fun with my role as "guinea pig", the high point being when the project covered five days spent with three anthropologists, experts on my particular research area, who happened to be at the beach for Christmas! Later, problems in my accounts with the project arising from the long distances and times lapses in billing negated some of my good feelings. Accounts, exchange rates, and explaining the locally necessary expenses to the bureaucracy were major headaches. Everyone was patient but unsure what should apply to my case and this uncertainty became a real frustration.

Once I had started my research, it became obvious that six months was a very unrealistic goal and my funding was extended to ten.

A large part of the problem in both accounts and getting started was that I could not foresee what I would actually be doing. My official briefings were much more applicable to life as a bureaucrat in an urban centre. Nobody at CIDA seemed to know what to tell someone planning to live without domestic staff and four hours from the nearest phone. In fact, there does not seem to be any adequate preparation for the ups, downs, and contingencies of rural field research other than the experience itself! Asking around yielded only a few good suggestions and a lot of reassurance that I was, indeed, capable of meeting the challenges. It was nice that people I respected had confidence in me but I was so nervous that I wanted a "how-to" manual. This feeling of inadequacy and impending disaster coloured my first few weeks in the Philippines and finally abated after the second month.

Nobody at CIDA seemed to know what to tell someone planning to live without domestic staff and four hours from the nearest phone.

ERMP's field action project where I was assigned was a good twelve hours from the main project office, up in the foothills of the central mountains. The main office, however pleasant and helpful, was not the site for my work and I went up to the hills to start the "real" thing. Herein lay the biggest challenge; simultaneously overcoming my culture shock and winning the support of the community. These were the darkest days I can remember. I was unfamiliar with everything and scared of the possibility of contamination in the food and the water. I hiked out to the project's target community and introduced myself, finding very few people who spoke English. They seemed skeptical when I announced my intention to move in and ask questions. Eventually I was able to find a house to rent. When I moved in the crowing of the cocks and other unidentifiable noises kept me awake all night. I definitely could not have gone on without a reassessment of my plans and some more support! The local project office helped me find two research assistants who spoke the local dialect and English.

They seemed skeptical when I announced my intention to move in and ask questions.

With their help, and visits from some of the Filipino and Canadian project leaders, the community accepted my project and the fun began.

To cope with my insecurities and the uncertainty at the outset as to what I would actually do and when, I decided that I was the major beneficiary of the work. By putting myself first, I was able to set realistic priorities and enjoy the good moments. For instance, if I felt I would get sick without more sleep, I put off completing the report or went with my informants to a festival, rather than rushing into interviews. My own overall satisfaction and well being was what I decided would produce the best experience and highest quality research. This also allowed me to take the time to get to know my informants and consider my impact on them and the ethics of my questions. They would not have accepted a researcher whose pushiness, tired manner, and obsession with deadlines they could not comprehend. Nor would I have found my stay and my study as rich and rewarding; I soon learned that my best insights and most enjoyable interactions came out of the unexpected opportunities.

Learning to walk on mud in the rain in rubber flip-flops, carry packages on my head without dropping them, and negotiating the tethers of the huge, huffing water buffaloes along the trail were the new skills I mastered going to the store.

In the field, I provided a lot of entertainment in exchange for information. Learning to walk on mud in the rain in rubber flip-flops, carry packages on my head without dropping them, and negotiating the tethers of the huge, huffing water buffaloes along the trail were the new skills I mastered going to the store. Interviews saw me tripping along earth-walled rice terraces built for smaller and nimbler bodies and eating and drinking a variety of local delicacies from communal bowls. Hospitality was extended everywhere, sometimes, I think, just to test my willingness to respect local ways! No matter what strange gaffes I made, people were concerned as to whether or not I was a nice, considerate, tolerant person rather than with my grasp of language, etiquette, or local hierarchy.

We learned to bring lots of snacks with us, as food was important to create the social context for story-telling.

My house became a stopping point along the main footpath to the nearest market town and all were welcome. My research assistants carefully built casual conversations and cups of coffee into invitations to visit and interview whole families. Research on gender and the management of forest land would require data not only from the male community leaders but from women and the rest of their households. We had to ensure that we interviewed a representative sample across the various strata of the community. This meant a lot of hiking around and a certain amount of checking up on people through the gossip of their neighbours to determine who was selling lumber, who was growing commercial vegetables and so on. Just as often as I asked questions with my assistant as interpreter, the situation was reversed. People wanted to know why I was in their community, where the information would go, and what I knew that convinced my government to send me all the way over the ocean to speak with them. This last question was the most difficult as I usually proved amazingly ignorant about even the simplest aspects of local agriculture. Sometimes our informants would be too busy with farming to talk, while other days we would be invited

to eat and listen to stories from the community's history told by one of the elders. These days were always a rich source of data and enjoyed by everyone. We learned to bring lots of snacks with us, as food was important to create the social context for story-telling. Apart from causing tooth decay, this helped consolidate our reputation as good neighbours.

Local team members of a government agricultural project gave us a lot of support, joining us on interviews and helping in the construction of a bathing hut. The novelty of bathing in front of a small crowd of curious children had worn off long before their curiosity. The bath, as a perk for my assistants and myself, was more than I bargained for. It provided a surprisingly valuable introduction to local politics in terms of the rights to water, the fate of the materials once I had departed, and my landlord's history of land grabbing. Many people stopped by to chat or just watch our activities and I often reopened my notebooks by the light of an oil lamp to scribble down their opinions in the early hours of the morning.

The days were often long and taking a break from the field was a necessity. It gave my assistants time to see their families and friends, pay their debts and get away from their 24-hour a day job of foreigner-sitting. I needed to visit the project office to check in and pick up more money, not to mention catch up on some Canadian news. My anthropologist friends had introduced me to several Filipino academics who gave me lots of personal support and insight into my data and the workings of the project.

The days were often long and taking a break from the field was a necessity.

One special family opened their home to me, providing hot baths, history lessons, entertainment, relaxation and great food. I could phone home from their house and have courier packages of mail sent to them for safekeeping. Having friends, phone calls, and mail made a big difference when I felt I was not fulfilling my own research goals. I missed out on a number of important events in the lives of my friends and family in Canada so it was extra important to share in the lives of my "adopted" Filipino family. It gave me a space where I was not playing the role of researcher or graduate student and I was accepted for myself.

The alternative situation, trying to establish my identity as a foreign traveler, constantly popped up on my solo bus trips to Manila and the project office. It revolved around one question nobody could answer before I arrived in the Philippines — what I should say about my marital status. While I agree that it is unpleasant to lie to the people you spend most of your time with, it is worse to be continually harassed because you are female and alone. I found that, within the community, talking about the boyfriend waiting for me in Canada was appropriate. As a young woman traveling alone on the buses, I found it simpler to wear a wedding ring and tell white lies. The alternative was a never-ending explanation of why I was still unmarried and did not

My friends in the community laughed at my "bus" ring as it showed they were at once closer to me and superior in attitude to their urbanized countrymen.

want to get married on this particular bus. Generally, people were polite and respectful. However, a few needed to be told quite firmly that they were being very rude when they inquired as to whether my morals were like that of the North American actresses they saw in videos tapes. Thankfully, electricity and videos were not available in my field site and stories of promiscuous tourists were equally uncommon. My friends in the community laughed at my "bus" ring as it showed they were at once closer to me and superior in attitude to their urbanized countrymen.

ERMP funded three Filipino students who worked in my field area on different topics while I was there. Occasionally we coordinated interviews and exchanged stories but mostly we saw each other coming and going. Communications were fairly unreliable so we never were sure whether our paths would cross or not. In conducting my research, I stuck to my own schedule and followed up on my own interests as much as possible. Occasionally, this resulted in some conflict with the objectives of another researcher - they would appear in an area after I had gone, only to be told that I had already asked that question and the informants were tired of interviews. As I left the field, the local project team began their own research, some of it in the same community. I tried to provide reassurances and introductions and some data for the incoming researchers but there were unavoidable hitches. It was not easy for me to pull the information the project needed from my own data on a moment's notice. I had pretty much done things my own way and I am still sorting through some of it, while the rest will have to wait until the thesis is finished!

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This situation illustrates a frustrating contradiction I found in the position of student researcher. Within the project hierarchy, as a student I ranked below the other members and was expected to behave accordingly. In the field, I was employing several assistants and administering a relatively substantial budget. There, a great deal of my activities revolved around my desires and I became a bit spoiled. Visiting the project office was coming back to earth! Sometimes, arrangements I had made in advance were pre-empted by another crisis and people were unavailable for meetings. The specific output expected for the project, other than a copy of my thesis, had never been clearly defined and I often failed to see how what I was doing would be integrated into its larger objectives. I concluded that I had better produce something satisfying my requirements first, and wait to be told differently. This certainly maximized my independence and flexibility and, probably, created my small budget overrun. In retrospect, the lack of a clearly articulated place for my work into the project was problematic for both sides. I inadvertently created more of a challenge for subsequent researchers and it seems that I have not contributed as much as I perhaps could offer.

Ripe peaches and seeing my family were prominent on my list of reasons to come back to Canada but it was a short list. At the end of my stay, I found it difficult to say good-bye to my community, my special friends, and my assistants. I was unsure about moving back into the life of a Canadian graduate student after nearly a year on my own with a lot of independence and a substantial research budget. Especially tentative when the task at hand required turning my notebooks and memories into a thesis over a long Canadian winter! And I was concerned that I had been gone long enough for my friends at home to forget me, that their time would be otherwise filled and I would be lonely while I wrote.

At the end of my stay, I found it difficult to say good-bye to my community, my special friends, and my assistants.

I am still adjusting to the changes although I've been back for almost two months now. Regular correspondence with my friends in the Philippines and new Filipino friends here help me feel in touch. It is important to me to nurture some of my special contacts there, both because I would like to return and because I recognize an obligation to continue these friendships based on respect for those people who supported me, rather than use their friendship as a means to produce my thesis. Now that Canada is beginning to feel like home again, I do not want them to think I have forgotten what their friendship meant for me while I was in the Philippines.

At times, I thought that going overseas to do my research was the most challenging thing I have ever tried to do. In the end, it has certainly been the most rewarding. It will be a few pressured months before I will see if I can translate my experience into an academically acceptable thesis and much of that depends on skills I have not used in a year. However, I did make lots of contacts who are suggesting that opportunities to work or research in a related area may open after I graduate. I am optimistic about the future and looking for a Ph. D. program which will eventually allow me to go back to the field again.

At times, I thought that going overseas to do my research was the most challenging thing I have ever tried to do. In the end, it has certainly been the most rewarding.

I know now that I can get myself and my luggage through a large third world city, work along side community drunks, soldiers, and communist guerrillas and survive typhoons and earthquakes, as did the rest of the country. That I can survive what for me are unusual conditions while making friends and learning from it all is really the greatest confidence boost I could want. I still cannot quite believe that I actually can get paid for learning and finishing a degree while having as much fun and adventure as I did in the Philippines. I have wonderful memories of the way it felt to come through the challenges I faced now that the frustration and fear associated with the obstacles have faded. It reassures me to think that I can always go back for a visit to see friends and remember the ups and downs, even if my career does not take me that way again.

It reassures me to think that I can always go back for a visit to see friends and remember the ups and downs, even if my career does not take me that way again.

Summary

The students who are able to include an overseas experience as part of their education are a valuable resource to both the community in which they become immersed and the community to which they return. Many will become future ambassadors for Dalhousie, some may pursue a career in international development, and all of them can share their experiences with their peers, teachers, family and friends. The knowledge they bring back and share enables us all to better understand our international neighbours.

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**PART VIII
CONCLUSION**

**TOWARDS 2000: SUSTAINING
DEVELOPMENT COOPERATION**

Erratum

Page 379, Line 4

"The summary of those findings is appended (Annex One)". This should have been omitted. To reduce repetition, it was decided to exclude Annex One from the second edition of Windows on the World.

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TOWARDS 2000: SUSTAINING DEVELOPMENT COOPERATION

by Ian McAllister

Introduction

Twelve years ago, six international development projects, connecting Dalhousie University with activities in parts of Africa, South East Asia and Latin America, were examined.¹ All had their origins during the 1970's. The summary of those findings is appended (Annex One). The framework of a project cycle was then used to structure the analysis. Four of those projects continued well into the 1980's and they (and their progeny) have been re-assessed here. For the large part, however, the two dozen projects/programmes, discussed in this book, have more recent origins.

The concept of a project has now been more broadly defined and several academic programmes and a new institution (the Centre for International Business Studies) have been included. A regional programme within Atlantic Canada has also been incorporated (involving native peoples). The framework of a project cycle has not routinely been used in the discussion of each group of activities in this book - albeit the value of that particular format is noted later in this chapter, in juxtaposition with additional models. One model (Table 1 on page 410) suggests a progression from individual faculty linkages to strategic network alliances, with projects located somewhere en route.

The concept of a project has now been more broadly defined and several academic programmes and a new institution have been included.

Some major differences can be detected over the twenty year period. The number of international projects and connections has grown quite considerably; of equal importance, additional educational frameworks are now quite firmly established (for examples, the MES, MDE and MMM programmes). Some policy and administrative infrastructure has been added (for example, the Lester Pearson Institute for International Development). The number of faculty members who have worked overseas, in connection with Dalhousie's linkages, has substantially increased; the number of Canadian students who have been studying, travelling or working overseas appears to have been growing. The number of foreign students at Dalhousie (according to visa criteria) has slipped slightly below 5% of the student body (see page xvi) and, in December 1993, this represented (at 504) a modest decline in the course of the past eight years, after a temporary surge of students from

Malaysia and Hong Kong in the preceding three years (giving a peak of 750 in 1985). There is a clear case for serious re-evaluation both of the quantitative and qualitative goals regarding foreign students at Dalhousie, as well as a number of procedures — including appropriate language tests, methods of recruiting, some elements of curricula, foreign student fees, student housing, and post-graduation follow-up procedures.

The fields covered by partnership arrangements have become more diversified.

The fields covered by partnership arrangements have become more diversified. Ocean studies and ocean policy issues have been accorded weight in various linkages — but, given Dalhousie's location and mission statements, probably not as much as might reasonably have been expected. Health studies, a second Dalhousie 'mission' priority, have not yet progressed far in terms of international development projects, notwithstanding a nursing project in Tanzania and some community health/medical training in Ghana. Training projects in economic development policy and practice have continued, moving largely out of Africa and into South East Asia and Eastern Europe. Environmental linkages have grown and are dominated by commitments in Indonesia and the Philippines. Business studies have continued to have international connections, also focusing more on Asia (especially China) and 'pulling out' of Africa. Following the North American Free Trade Agreement, interest in connections with Mexico is now starting to be noticeable. A variety of social service oriented projects have developed links in many parts of the globe — albeit in a fragmented way. Several themes have gained clearer recognition. The importance of sustainable development and of women in development are two such cases. These themes can be noted within many projects; care has to be taken to distinguish between fashion and substance.

Were a year 2000 edition of this book to be published, one might find the following themes among those given more prominence...

Were a year 2000 edition of this book to be published, emerging interests suggest one might find the following themes among those given more prominence: sustainable development; disaster studies, humanitarian law, refugees, relief and community development; new approaches to distance learning; partnerships with Eastern Europe; 'peace-making' and development; bio-technology, ethics, and development; and, the better integration of Canadian regional development (including projects involving native peoples of Atlantic Canada) and international networks. More links with NGOs can almost certainly be expected, as probably can be closer relationships with other universities, with the private sector and also with 'twinned' local communities. It is less likely that partnerships with the public sector will become much more extensive, given that quite considerable linkages are already in place and also that a reduction in the spread of Canadian governmental, bilateral programmes appears probable. 'Strategic alliances' may be anticipated between Dalhousie, a cross-section of other organizations, and some four or five regions — many of which already have somewhat 'ad hoc' linkages with the university.

The body of this closing chapter is structured as follows:

- I. Education and training;
- II. Research;
- III. Community service;
- IV. The Challenge of Capacity building;
- V. Towards sustainable development?
- VI. Conclusion.

I. Education and Training (Formal and Informal)

Four graduate programmes, Master of Environmental Studies (MES), Master of Development Economics (MDE), Master of Marine Management (MMM), Master of Business Administration (MBA), have been examined. They were found to have been influenced and enriched by several of the linkage projects reviewed, but while they themselves provided important supporting infrastructure for the training components required by some of those projects, they had evolved in a parallel (but disconnected) process. In many useful ways they were seen to have served as bridges between students, faculty members and some of the 'development' projects — but it became obvious that closer connections could have generated additional benefits to all concerned.

Four graduate programmes have been examined. They were found to have been influenced and enriched by several of the linkage projects

Some elements of training were found to have been characteristic of all the 'linkage' projects reviewed. The variety of training approaches was considerable, ranging from formal degree components (especially in the cases of links with Indonesia, Nepal and Guyana) to 'on assignment' training (for examples, individually-tailored secondments of senior Zimbabwe Government and Baltic State officials to meet with Canadian public servants on-the-job, as well as with private sector officers). In the case of both these latter examples, short courses at Dalhousie complemented the field assignments and were found to provide a desirable dimension.

Innovative methods of training were often to be found. These included: a special 'experience-exchange' workshop organized for the entire cabinet of the Government of Ghana and led by Robert Bryce, formerly Canada's Deputy Minister of Finance, on behalf of Dalhousie in Accra; a complex network developed between former course participants through the International Oceans Institute; and an extraordinarily interesting NGO framework, namely the Nova Scotia-Gambia Association, (which continues to draw together high school students and parents, high school teachers and community leaders, university faculty members and students within the framework of a Nova Scotian association linked to the Gambia).

Innovative methods of training were often to be found.

Among some of the generalizations, within the theme of education and training, that might be drawn from Dalhousie's international experiences are the following:

Large numbers of Dalhousie students were found to have spent time overseas.

- 1) Large numbers of Dalhousie students were found to have spent time overseas, as a direct or indirect component of many project connections. Such visits included:
 - Short-term, informal visits of two or three weeks. These were found to have been 'eye-opening' for the students. Unless great care is taken, however, with the preceding and follow-up briefings, many educational opportunities can too readily be lost. With effective planning, such visits can usefully be integrated into course requirements — not as a condition, but as an option;
 - Visits tied to thesis work. These were often found to have represented a successful approach. Some, for example, included briefings in CIDA and IDRC offices in Ottawa, in the World Bank and IMF in Washington, as well as work in the partner countries; (the MDE programme was the most systematic for a period, with routine support both from Dalhousie graduate faculty grants and from CIDA; the MBA international case work in Europe has proven particularly innovative; the MES and MDE programmes have been gaining benefits from sustained relationships through Indonesian and Philippine projects).
 - The manner in which students have been prepared (for often potentially hazardous overseas assignments) was found to have ranged from thoughtful to chaotically inept. Health briefings were sometimes inconsistent and even the 'terms of reference' and financial arrangements were sometimes noted to have been seriously deficient. In too many cases students were viewed by project staff to be 'appendages to the real project,' as distinct from important and valid participants. Particularly in the case of the MES programme, there has been a continuing failure to help students 're-integrate' into Canada and the university. 'Return culture shock' is not to be treated lightly.
 - Participation in workshops (the ocean management courses were the most routine). There seemed widespread agreement that such workshops should be able to be more systematically linked into academic course requirements or thesis research — but, it was also emphasized, such connections should definitely neither be a condition for workshops nor for

supporting the attendance of Dalhousie students at workshops;

- 'Field exposure' and/or community service visits. These were found to have been both linked to Dalhousie projects and also sponsored through other programmes (such as the World University Services of Canada, Canadian Crossroads International and Canada World Youth). As through workshops, academic 'credits' (for example, as an outcome of field reports) have become increasingly attainable through field and/or community experiences. The undergraduate International Development Studies (IDS) programme has facilitated such credit possibilities, but hitherto the IDS programme itself has been run on 'a wing and a prayer' — reflecting the problem of interdisciplinary programmes in accessing core funding and faculty, when 'traditional' departments 'call the shots'.

- 2) Numerous management and administrative visits from Dalhousie have occurred to partner institutions. Many of these also contained training or educational dimensions. Some examples will illustrate:

Numerous management and administrative visits from Dalhousie have occurred to partner institutions.

- There have been regular visits by project directors/coordinators from Dalhousie, most of whom are faculty members. When with the partner institutions, some have made a point of giving seminars or lectures to regular academic classes and/or special public sessions; but others were found to have ignored the more academic dimensions of project linkages;
- The current Dalhousie president has visited a number of the linkage projects overseas. This has served to demonstrate, in a public way, that international commitments are not of peripheral interest or passing relevance to the senior spokesperson of the university;
- Somewhat less routinely, junior administrative staff at Dalhousie have visited the overseas' projects. When this has been done, they (and those working with them) have remarked on the value of such first-hand exposure for understanding the spirit and practicalities of the project. Such visits should, it was argued, become built-into all larger projects, as should special training programmes for these administrative officials — who are so critical to the

longer-term effectiveness of these often complex activities. Staff members frequently develop important insights on the projects and should be encouraged to contribute to regular teaching and training activities so their experiences become more widely shared, helping to bridge often counter-productive gaps between administrative, policy and academic work. These individuals have tended to perceive themselves to be (and been made to feel by sometimes extraordinarily arrogant faculty members) a somewhat isolated, fragmented and temporary 'group' at Dalhousie — yet their roles are essential for successful project implementation; their experiences need to be built on and mechanisms derived to enable them to move between projects. At the same time, they must be encouraged to view research and publications as not beyond their own mandates or capacities. The gap between faculty roles and those of administrators was frequently perceived to have been far too rigid and, when such has happened, it has reduced the effectiveness of projects.

Numerous Dalhousie faculty members and 'extended-faculty' were found to have taught on these projects overseas, both on short and long-term contracts.

- 3) Numerous Dalhousie faculty members and 'extended-faculty' (e.g. officials seconded from research institutions, other universities, businesses and governments) were found to have taught on these projects overseas, both on short and long-term contracts. The work experience on the projects enabled those involved as advisers and instructors to extend both their own knowledge and experience, as well as to contribute in a professionally satisfying manner to the overseas activities. A number of serious weaknesses were also uncovered. These included:
 - Some projects appear to have been narrowly managed and taught (sometimes by one or two individuals in a secretive and 'control-oriented' way) and, for some projects, only faculty from a single discipline participated, when the project could have been better served had there been multi-disciplinary management and teaching teams. The international ocean management courses have been excellent models of interdisciplinary cooperation, with spectacular results;
 - Projects have proven most vulnerable when single individuals and single departments have 'gone it alone', regardless of how good the faculty member may have been individually within the parameters of a single discipline. **Teams** of faculty, it is argued, need to be deployed around the educational themes of many more of the linkage projects, with training and

research experiences shared. The design and building-up of training modules with some transferability between projects and programmes (e.g. MES, MDE, MBA etc.) appears a direction to explore;

- The teaching programmes in the partner institution may require more 'give and take' than was sometimes found to have occurred. An apparent lesson, in this regard, can be drawn from the linkage with the Ghana Institute for Management and Public Administration (GIMPA). A deliberate decision had been made to introduce new modules on development planning and project management, alongside traditional modules on personnel management and accounting from existing programmes at GIMPA; these latter segments continued to draw upon existing Ghanaian teaching strengths. Dalhousie inputs were seen simply as an incremental part of a teaching programme — not the exclusive or dominant part. This approach was to prove critical both to the initial acceptability and longer-term sustainability of the programme. In the case of the Tanzanian nursing bachelors programme, in sorry contrast, there proved no flexibility in Tanzania in the case of some basic courses (designed for doctors), resulting in a high failure rate among nurses, for no apparent, educationally-sound reason. The traditional Tanzanian courses appeared to have been inappropriate to the backgrounds and needs of the nurses and, before embarking on such a programme, this issue clearly should have been resolved. Such a point, it must be noted, can more easily be concluded with the benefit of hindsight, but at least this case may be of relevance to future projects;
- A substantial number of faculty was found never to have debriefed in writing and, equally surprising, a large number had never presented seminars to colleagues or students once back in their own departments, or anywhere else. When lessons from faculty teaching overseas have been transmitted back into the classrooms at Dalhousie, they appear to have been well received by students. Efforts are being made to encourage this to become more routine in some parts of the university (for examples, in the School for Resource and Environmental Studies, the School of Public Administration and the Department of Economics);

The teaching programmes in the partner institution may require more 'give and take' than was sometimes found to have occurred.

A substantial number of faculty was found never to have debriefed in writing.

The need to send individuals with genuine cultural sensitivities and a spirit of commitment has been one very clear finding.

- Training support for programmes in the partner institution have often included curriculum development, course material support and design, the provision of computer hard- and soft-ware, in addition to the sending of advisers and instructors. Experiences from material-support services, in particular, have been very mixed. Faculty appear frequently to have been ill-equipped to advise on such components of a project, particularly in the context of different cultural and economic settings (e.g. the problems of spare parts and technical supporting services can be very considerable);
- Institutions have their own particular idiosyncrasies and, in general, Dalhousie appears to have found the sending of its own faculty easier to orchestrate and less problematic than the hiring of others from outside institutions: but while this generalization was quite frequently made, it should be treated with some caution. Importance has to be placed on the selection process itself — whether for Dalhousie faculty or outsiders. The need to send individuals with genuine cultural sensitivities and a spirit of commitment has been one very clear finding;
- In the case of a number of projects, returning Dalhousie faculty were not drawn upon for further work with the project, even though they often had contributed most effectively. Their loyalties subsequently wavered and their experience was wasted rather than re-inforced. Such a failure has reflected negatively not only on Dalhousie's own capacity-building work within the university, but also within the Maritime region of Canada, not to mention the loss to the partner institution overseas. There was also periodic reference made to lack of recognition by the university administration and by departmental colleagues for overseas' project work. This did not, however, appear to be a wide-spread grievance and may have rather reflected insecurities in the minds of those concerned, than any substantial reality;
- Despite the growth in the administrative apparatus supporting (and at times 'milking') Dalhousie's international projects, the systems for preparing students and faculty before departing (and when overseas) were noted to be chaotic in numerous cases. A review of basic procedures (including for health, financial planning, and social security) appears long overdue for faculty and staff (as well as for students).

- 4) Many faculty members and future faculty, from the linked institutions overseas, have visited Dalhousie (and also other Canadian institutions co-ordinated through Dalhousie projects) for both formal and informal training programmes. Thus, for examples, faculty members from Guyana have undertaken School of Social Work (M.S.W.) degrees at Dalhousie, faculty from Tanzania have taken Dalhousie nursing programmes, faculty from Indonesia have taken the M.E.S., from Nepal the MDE, from China the MBA, from Zimbabwe the MPA and MBA, and so on. A problem was encountered with the Ph.D. programme component of the Dalhousie project in China; this part of the programme was discontinued after five out of six graduates stayed on in North America. Changing political circumstances were obviously not unimportant in that case. The general consensus, for the other programmes, was that these visitors have contributed a great deal both to the Dalhousie faculty and to other students through their comparative insights. Moreover, there was not normally a high fall-out once the graduates returned: most were found to have continued to work in their institutions — some indication of the 'sustainable' value of these kinds of linkage programmes. The relevance of what they have learned (or appropriateness of the technology) appears, however, to have been more 'assumed' than studied in any overall manner for potential insights. In the case of various projects, positive evaluations were found to have been made — but nothing had been attempted on a cross-section of the projects. Such warrants further review and could perhaps be undertaken through research for a thesis.
- 5) For some projects (e.g., those with Ghana, Zimbabwe, Guyana, Indonesia, Tanzania), fieldwork and on-the-job training in the home country have played very significant roles and, when built into programmes, appear (from the sample of evaluations reviewed) to have been considered of significant benefit by almost all involved.

The general consensus was that these visitors have contributed a great deal both to the Dalhousie faculty and students through their comparative insights.

It was surprising, indeed, that on-the-job training workshops and other supporting activities did not feature in more projects, and this appears to have been more a reflection of the imagination and experience of the faculty members involved than of the 'needs' of the particular programme in question. Integrated field exposure would also appear to have had great value as a 'built-in' component for many projects. In the case of a number, however, local field-work was conspicuously and surprisingly absent. Once again, lessons were not being transferred between projects.

- 6) The 'cadillac' of training projects was that built by Dalhousie and the International Ocean Institute. Large amounts of funding have been routinely and imaginatively raised, while senior officials from UN and other bodies have flown, with Dalhousie faculty, to many corners of the globe where (normally ten week) courses have been held. The course directors were routinely drawn from a Third World Nation to help ensure relevance, and a cadre of generalists and experts in ocean management fields has now been built up in numerous countries, substantially as an outcome of this programme. Its major strengths have undoubtedly been the commitment, genius and entrepreneurial ability of Elisabeth Mann Borgese, whose brain-child the programme was (and still is) and the knowledge, pertinacity and training skills of Satya Pal Jagota, a distinguished, retired Indian public servant. Its shortcomings (now being rectified) included some slowness to build up course materials and inadequate linkages into Dalhousie's regular programmes.

It is concluded that the time is long-overdue to experiment with training courses for Dalhousie's own trainers and to devise ways for more effective co-operation between a number of Dalhousie's existing institutions.

Conferences, distance education, the production of training manuals and books, on-the-job training, degree programmes, networking of courses between institutions, curriculum development ... the mix of educational and training activities has been a pot-pourri of innovative approaches, across many projects. Yet, it also appeared that much training has been, in overall terms, somewhat 'hit-or-miss'. The major reason for this was an extraordinary failure to share experiences effectively between the faculty associated with Dalhousie's projects. There has been something of a 'go-it-alone' attitude demonstrated by many individuals and departments involved, and a failure to take advantage of educational and training expertise on pedagogy within the university itself. The Pearson Institute, despite various accomplishments, failed to recognize or, at least, to overcome this problem — possibly because much of its emphasis was placed on administrative issues. It is concluded that the time is long-overdue to experiment with training courses for Dalhousie's own trainers and to devise ways for more effective co-operation between a number of Dalhousie's existing institutions.

Research

A. Research and Publications

Research is at the heart of a university. This embraces a commitment to learning more about the world as well as to problem solving. It necessitates the storing, accessing and analysis of collective memories, as well as the communication of knowledge. Some of the quest for knowledge is curiosity-driven and may focus on the conceptualization of theoretical constructs; some is more directly 'applied' — more oriented

towards contemporary or anticipated issues. Some of the quest may appear to be undertaken as if economic and social limitations are of little real consequence; some is quite directly designed to impact on them. The boundaries between these approaches are not hard-and-fast and the orientations can themselves be complementary. Each feeds on the other.

Most cases examined in this series were, from the outset, more weighted towards 'applied' or direct 'problem solving' and policy directions; but several (for examples, those relating to aquaculture in Asia and to environmental studies in Indonesia) were initially as much curiosity driven, as more immediately policy directed. The comprehensive books (a series of seven) on the ecology of Indonesian regions represent an impressive accomplishment of the Environmental Management and Development programme with Indonesia (EMDI). Undoubtedly these will prove invaluable to researchers and policy-makers alike, over coming decades. Conversely, out of particular applied experiences (for example, the provision of policy advice and training to public servants in Ghana and Zimbabwe) came a number of more generalized studies and theses designed for broader application; some are used now in a number of other countries and by organizations quite unrelated to Dalhousie.

In the case of a number of Dalhousie linked projects, interdisciplinary research teams have played an important role. When they have not, the quality and relevance of the research (and training) has probably been at risk. Most projects constantly faced issues requiring cultural sensitivity, were challenged to fuse economic and social insights, as well as were questioned about their appropriateness and sustainability. The very thoughtful manner in which the Micmac development projects, within Nova Scotia, were undertaken, as well as the mollusc research internationally, highlighted the importance of participatory research at local levels, thereby ensuring that those, who were intended to benefit from research results, were given opportunity to shape the research process itself.

The research, engaged in through the projects reviewed, has frequently spilled far beyond the faculty at Dalhousie to include Dalhousie's Canadian and foreign graduate students (for examples in the cases of the Indonesian, Philippines, Ghanaian, Chinese and Zimbabwean projects) — enabling students to spend substantial time in the field. In some projects, for example the aquaculture network in Asia, a considerable degree of the research has been undertaken by Dalhousie faculty with other professionals in the partner 'Third World' institutions. In the case of all of the above mentioned projects, as well as that in Nepal, research has been undertaken both in the home countries and in Canada by faculty and students of the linked countries.

In the case of a number of Dalhousie linked projects, interdisciplinary research teams have played an important role.

In the case of a number of projects, research was found never to have 'taken-off' in the Third World located institution.

In the case of a number of projects, research was found never to have 'taken-off' in the Third World located institution. Among explanations have been:

- Lack of incentives in some Third World institutions for research — frequently because of pressures on faculty to earn additional incomes from consulting and other paid employment, and/or because of large teaching commitments, and/or because of little or no weight being placed on research for job advancement purposes. Research can also lead to politically embarrassing findings.
- Lack of emphasis on research by some of the Dalhousie faculty themselves who have been involved. This has sometimes been because the projects have been narrowly defined as 'training projects' or 'consulting projects', without recognition of the value of potential research dimensions; sometimes it has been because the project has been viewed as 'a product to be delivered', with emphasis on administration, rather than as a genuine partnership arrangement between one (or more) universities. There were found to have been times when projects had indeed been recognized to provide opportunity for Canadian researchers, without adequate encouragement being given to the importance of building up research capacity in the partner groups. On balance, the funding agencies have been supportive to research components being built into projects, but (particularly in the case of CIDA) it has been up to the university faculty to take the initiative — not an unreasonable position, given the mandates of a university.

The publication output of these projects has varied considerably.

The publication output of these projects has varied considerably — from virtually nothing beyond administrative progress reports to a comprehensive mix of publications (as in the cases of Indonesia, Ghana, China, Zimbabwe, SEAPOL projects and the Micmac Work). Ideally research outputs (including evaluative analysis of the experiences of the projects themselves) would be disseminated in a variety of publications — from project reports through to conference papers, books and peer-reviewed journal articles. It is of great importance that such publications do not solely become available in the North, but are also readily accessible in the region where the partner institution is located. This often requires the work to be available in the local languages, a point well recognized in the case of the Indonesian and Chinese projects. In the case of the latter, the project provided financial support for a substantial number of publications (conference proceedings, research papers, books) in Mandarin.

One of the least satisfactory findings of the Dalhousie experience has been how little has been undertaken to link the research outputs or processes between the projects. There was not much evidence of

exchange of publications or research experience between projects within the same university (Dalhousie) and virtually no evidence at all of such exchanges between the linked partner institutions (e.g. between those in Indonesia and Nepal, or in Ghana and The Gambia). This weakness may well be a quite widespread problem (based on informal discussions subsequently with officials in a number of other universities); efforts to overcome it are surely warranted.

B. Research for Development

Much university research is not primarily developmental in purpose, albeit the eventual impacts of a new discovery can extend far beyond the goals and aspirations of the researchers. Research is rarely viewed as confined by geographical boundaries: essentially it is international in character. The activities discussed, in Windows on the World, have substantially been funded through the IDRC and CIDA, both organizations mandated to foster international 'development'; hence 'development' flavours most of the research activities — at least in terms of many of the criteria used in accessing the funds. Questions, however, obviously have to be raised about precisely what is meant by 'development' in the context of any of the projects' activities, including 'for the development of whom or what?' In many cases, such questions do not appear to have been asked that energetically when the project has been embarked upon — but increasingly, once much research was under way, those involved began to broaden their horizons and (certainly in the case of the 'natural science' oriented projects) a variety of social science dimensions began to be recognized to assume relevance. Projects with social science beginnings did not appear so prone to build bridges into the natural sciences. Discussions about 'appropriate technology' by social scientists, for example, rarely progressed into research activities further to explore potential options.

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The aquaculture genetics work on tilapia in Asia highlighted gaps and difficulties that can develop between research outputs and potential users, in that case fish farmers. The project had placed emphasis on linking into institutes that were locally directed and on helping build up local research capacity in the science required. How best to transfer the research findings to the potential users was only latterly becoming a recognized challenge, with the need to draw upon insights from other disciplinary fields and other sets of experience.

The aquaculture work is of interest also because it drew parallels with projects embarked on in the earlier days of the Green Revolution. Science and technology are progressively being applied to aquaculture in much the same way as had previously occurred for agriculture. A lesson from the Green Revolution has been the importance of recognizing the train of social/cultural/ecological and economic forces that come into play with the application of new seed strains, fertilizers, etc. and that these can be every bit as important as the scientific discoveries themselves — if the projects are to be of sustained benefit

to the local people. At least in the earlier years of the Green Revolution, the costs were substantially underestimated (both in social terms and as regards ecosystems). The same could well become a feature of the emerging 'Blue Revolution'. As one outcome of this review series, the Dalhousie project is now exploring ways to achieve a more effective interface between biologists and social scientists and, at the same time, a systematic analysis of Green Revolution experiences.

Research underpinned the evolution of the Micmac project (building on a substantial study of marginal work-worlds that had brought a number of disciplines together). The research undertaken has served to shape subsequent project design processes, leading to a framework for identifying development strategies by those living on the reserves, as well as educational projects.

Research 'for development' was found to have been quite differently viewed across projects.

Research 'for development' was found to have been quite differently viewed across projects. Five main groupings were in evidence:

- (1) The 'science-based' projects had historically been somewhat 'funding source' driven and relatively discrete 'hard science' activities. They had placed considerable emphasis on research outputs and on the build-up of local research capacity, including local scientific research management. In the mollusc project, participatory research was critical at the very local levels. The mollusc work developed a far-reaching network to link previously isolated, local projects into the experiences of other similar projects across much of the globe — a far-sighted approach made possible by the IDRC. Beyond that, most projects were not hinged, at least by the researchers, to broader social, regional economic or national development strategies: recently, broader potential links have started to be explored — opening up opportunities for closer collaboration with social scientists;
- (2) None of the economic/public administration, social work or education projects was 'research driven', but all drew upon comparative and in-house research in a somewhat casual way — as inputs for training and policy advisory courses. Their focus was on training outputs. This category did tend to have a broad 'game-plan' that extended beyond the contractual life of the particular project and it did have some community links. In many respects, this group was far more involved at the development policy end of the spectrum than the group of science projects. As a category, the projects had not shared experiences nor learned skills routinely from each other (across departments as distinct from within them). Research outputs tended to have been the result of Canadian individual initiatives rather than project driven and hence

patchy as between projects and over time. Very little research was generated by the non-Canadian partners, in part because financial exigencies placed pressures to earn extra incomes from consulting activities, in part because — although great weight was placed on the accumulation of further degrees — curiously little credit was placed by the overseas' faculty on subsequent research and publications;

- (3) The management training project with China has probably been the most extreme example of a 'strategic' project, in terms of demonstrating the value (and some dangers) of a 'business plan approach' to a development partnership. On the one hand, the project goals and management plan (including course manuals) were clearly expressed and 'controlled', with well identified outputs and an entrepreneurial attitude to project costs and revenues. On the other hand, recognition of cultural sensitivities risked being understated — certainly in the earlier stages. Considerable research was undertaken by Chinese faculty (and encouraged by the project), and textbooks were designed by Canadian and Chinese faculty members. Little, however, has thus far been written about the complex, but extremely interesting, range of experiences of the linkage itself, as distinct from the energetic publication programme on course content themes.
- (4) The environmental projects (particularly the Indonesian ones) were probably the most comprehensive in approach and were certainly best-funded. However, as they became larger, so the 'research for development' elements appeared to become overwhelmed by the worries of, and consequent emphasis on, 'business-like' management. The Indonesian projects appeared to be in danger of losing those very characteristics that had been their initial strengths — the commitment of university faculty members to research and training as the underpinning for sound policy and project advice. While students from several graduate programmes have benefitted from field visits to Indonesia, their research has frequently not been effectively tied into any research agenda linked to the Dalhousie-Indonesian programme and they have often felt (and been treated as) unnecessary 'impediments' to the 'real work'. The Indonesian programme (as it has now become) has clearly reached a watershed point and its future relationship with the university as a whole, and not merely with the School for Resource and Environmental Studies, warrants redefinition;

The environmental projects were probably the most comprehensive in approach.

- (5) Two graduate programmes (the MDE and the MES) have generated considerable international research as a product of the thesis requirements and much of that has been 'developmental', both in subject matter (for example, Juanita Montalvo wrote, for the MDE, on "Multi-Purpose River Development: The Case of The Mactaquac Hydro-Power Dam, The Tennessee Valley Authority and The Volta River Project") and in impact (for example, Byas Poudel's MDE thesis, "Canadian Development Assistance to Nepal" contributed to the Nepal-Dalhousie project, as well as became a book of value to members of the aid community).²

Community Service

All of the projects and programmes were found to have formed bridges of some kind between two main community groupings — those in Canada and those in one, or occasionally several, partner countries.

The best recognized activities at the local level have probably been a series of projects with The Gambia.

Many of the projects reviewed appear also to have generated benefits to Nova Scotia and Canada.

Benefits and costs to the Canadian community were not being assessed, in any routine fashion, by those reviewing the projects. This subject warrants further exploration. The best recognized activities at the local level have probably been a series of projects with The Gambia. These have strong links into high schools, several universities, the formation of a Nova Scotia — Gambia Association and an unusually productive network of local connections. A Dalhousie teacher-training project is but one offshoot of the many links developed through The Gambia projects. The educational impact of the combination of The Gambia projects, at the local level, appear to have been substantial. Costs seem dwarfed in contrast. Many of the other projects reviewed appear also to have generated benefits to Nova Scotia and Canada, though normally not as part of any strategy, and frequently without much recognition. Included among such benefits appear to have been:

- Educational benefits for Canadian students, citizen groups, teachers and faculty members, public and business officials, as well as local NGO representatives. Large numbers of Canadians have been exposed (through the projects) to overseas students, officials and faculty who have visited Canada as part of the work, as well as to Canadian faculty and students who have returned from participating on the projects and given talks, written about their experiences, and so on;
- Business contact benefits that have been linked to some projects (particularly through the Centre for International Business Studies). A number of projects, for example in Zimbabwe and Indonesia, have been responsible for major export orders for Canadian goods and services;

- Social and cultural enrichment. Such have clearly been bi-products of many of the links — contributing to better understanding between many in the region and other parts of the world; there have been numerous private visits in both directions, joint-humanitarian inspired activities, and cultural events (for example The Gambia night dinners, open to the public and drawing sometimes as many as four hundred participants);
- Commercial/economic benefits to hotels, airlines and businesses in Halifax and the region, as an outcome of funds that would not otherwise have been expended in this part of Canada;
- The Micmac research and development projects appear to have been of significant value to the native peoples of the region, and it was most encouraging to note the substantial increase in Micmac students now at Maritime universities. It can be predicted, given the impressive qualities of many of these people, that some will be numbered among the future leaders of the country.

The mainstream 'community costs' will largely have fallen in the category of 'opportunity costs', especially in terms of regional projects and other activities that Dalhousie faculty might have otherwise been engaged upon. While there has been a temptation to downplay these costs (given the focus of the cases), they cannot be written off as irrelevant. It is probable that those who engaged in the overseas linkages represented an unusually high proportion of the entrepreneurs within the university community — their skills therefore have not been focused as extensively on the problems and opportunities of the region, as would otherwise have been possible. In response, it could be argued that the value of their outside perspectives could have offset some of these costs, and furthermore, the university's overseas links are a major incentive for some faculty joining and/or remaining at Dalhousie. Moreover, it could also be argued that Dalhousie is an 'international' university and, as such, has a major responsibility as a Canadian partner in international endeavours, given, amongst other reasons, Canada's considerable dependency on export earnings and international acceptability. Yet, it must be concluded, there has certainly been scope for generating considerably more regional development benefits from these overseas connections, as well as broader national benefits, than has been achieved.

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Benefits beyond Canada, in the partner nations at the community levels, have probably been somewhat greater: most projects were indeed targeted to assist those nations. Hopefully, an improved quality of advice will have been subsequently received from officials who have participated in the courses and on research assignments, some private sector benefits will have been gained as an outcome of better-trained

workers (from Dalhousie sponsored classes), schools and universities will have been that much more effective within the regions concerned. Some financial and capital benefits will have certainly accrued, in the partner nations, through the projects, whether in the form of hotel and airline revenues from visitors, rental of space for courses, income benefits to family members of participants who frequently have sent money home (as a result of extreme frugality), capital support for additional buildings and equipment (paid by CIDA in particular) as a component of many projects, and so on.

Costs have certainly also been incurred in the partner countries. These will have included: some distortion of priorities to respond to Canadian concerns as distinct from local ones; some inappropriate ideas and technology that will have been infused as part of some project outputs (however, well-meaning were the intentions); some social costs — for example those associated with long absence of family members in Canada (frequently those studying in Canada are parents and only one spouse is normally able to come and benefit from the programme); some support costs for Canadian advisers and their families, when they have come to work in the host community.

Three suggestions of how to increase benefits, for future projects, will illustrate...

It is evident that far more could often have been done to increase the benefits both to Canadian and partner overseas communities from these kinds of projects, as well as to minimize at least some of the costs. Three suggestions of how to increase benefits, for future projects, will illustrate:

- As part of their stay in Canada, overseas students could readily be exposed to Canadian NGOs and given an opportunity both to take relevant short-courses and to participate in teaching Canadians on training programmes about issues pertinent to their own countries. For organizations such as the Red Cross and Red Crescent, Oxfam and UNICEF, such links could prove invaluable over the longer-run; many of these students would return to their homes as well-informed, trained potential volunteers and, in some cases, might become staff members. Within the MDE programme, initiatives are now being taken to encourage this approach (e.g. with the National Red Cross Societies of Japan, The Gambia, Jamaica, Nepal, Ghana, Mexico, the Nova Scotia Branch of the Canadian Red Cross and similar discussions have been held within the International Federation of Red Cross and Red Crescent Societies and Oxfam). There is much scope for such cooperation, both across projects and also linked with other academic programmes;
- Private sector linkages, in the case of most of the projects reviewed, were weak or non-existent. Yet these visitors to, and foreign students at, Dalhousie will in many cases

be the future leaders of governments and large corporations. Far more systematic efforts to expose them to business interests in Canada could be beneficial, without distorting the primary objectives of the projects. Indeed this could become a regular programme activity of the Centre for International Business Studies;

- Most projects could be broadened to include community linkages (twinning different communities in Nova Scotia to particular projects). Businesses, branches of an NGO, schools and/or other institutions in the linked communities could also become involved. This would serve to extend the partnerships beyond Dalhousie University and to spread the educational benefits. It would also result in more regional commitment (as recommended by the recent task force on the economic development of Halifax),³ and could 'thicken' the range of human and financial resources potentially available. In the partner countries, comparable networks of local linkages could prove of equal or even greater value.

Sustainability, a characteristic most noted in The Gambian, Guyanan, Indonesian, International Oceans Institute and Ghanaian programmes, would appear to have better prospects when a complex of broader connections has been put into place.

Sustainability...would appear to have better prospects when a complex of broader connections has been put into place.

IV. The Challenge of Capacity Building

Models, Problems and Lessons

It has already been remarked that, for many projects, the 'end products' had been quite narrowly identified as research outputs, and/or trained officials in government departments, and/or formally qualified graduates, and/or the provision of particular policy advice. One major conclusion to be drawn from this review is the need to build in specific goals of capacity building from the outset and, once detailed targets are agreed on, to place emphasis on an explicit strategy to achieve them. Such an approach will then help determine the methods used to achieve many of the other outputs. If capacity building is not viewed as a core goal (and rarely was that the perception in the projects examined), then it readily becomes neglected until too late: habits will have been developed and, amongst other characteristics, 'paternalistic' attitudes can have become firmly entrenched.

If capacity building is not viewed as a core goal then it readily becomes neglected until too late...

The capacities of three groups have normally to be considered. First, those of the partner institutions; second, those of the organizations and target groups that are supposed to be strengthened, largely through the

partner institution; third, but of frequently understated importance, the capacities of the Canadian institutions, in most of these cases Dalhousie University.

One model that could contribute to a more systematic approach in the capacity building of projects has been developed by Mary Anderson and Peter Woodrow.

One model that could contribute to a more systematic approach in the capacity building of projects has been developed by Mary Anderson and Peter Woodrow, under the auspices of the Harvard Relief/Development Project.⁴ They distinguished between vulnerabilities and capacities. *Vulnerabilities* are defined as underlying weaknesses — frequently long-term and of a structural or attitudinal nature. Unless vulnerabilities can be identified and tackled (perhaps through disaster preparedness training or, for example, in a community health context through the provision of clean water), disasters will be prone to recur. *Capacities* are defined as resources that may already be in place in the form of existing skills, institutions or facilities that can be harnessed, encouraged and built upon. Very often it would appear, from the thirty relief case experiences examined by Anderson and Woodrow, that existing capacities have been ignored or undermined by the approaches taken by international relief agencies. This, it can be argued, almost certainly has been the case for many international development activities — including for many of those undertaken through Dalhousie. While a number of agreed upon, short-term, 'outputs' may have been quite successfully achieved, institutional capacities for sustained effort may have been weakened or even destroyed in the process.

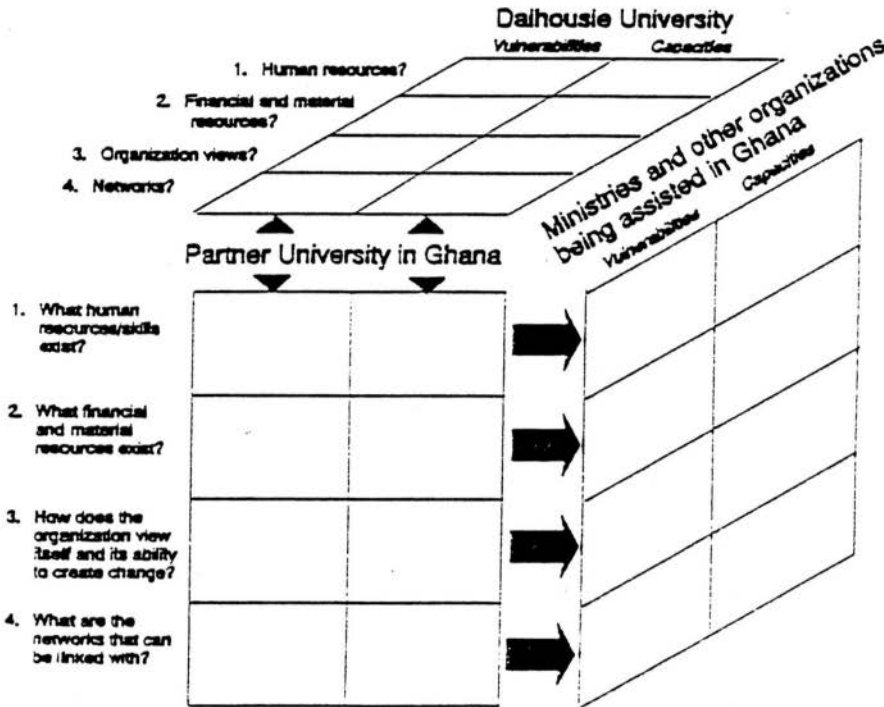
Vulnerabilities and capacities can be explored from a number of vantage points.

Vulnerabilities and capacities can be explored from a number of vantage points. Figure 1 (an extension of a matrix concept originally developed by Anderson and Woodrow) assumes there are two major 'implementing' partners — Dalhousie University and an overseas institution, (in this example a university in Ghana); these two partner organizations are joining forces to strengthen, in the model, a number of ministries and other organizations in Ghana.

The same matrix format has been extended by Anderson and Woodrow to include additional categories — for examples gender (by dividing the Vulnerabilities and Capacities sections into M and F components), income levels and age groups; matrices can be compared over different time periods (for example 1980, 1985, 1990) in order to monitor progress. They can be designed to contrast programme options with their likely impacts on capacity building (as, for example, in Figure 2, which also draws on Anderson's and Woodrow's work). None of Dalhousie's projects was found to have been utilizing models of this type, but this kind of approach appears to have as much potential value for analyzing university 'partnership projects' as it does for disaster relief projects.

FIGURE 1

Analysis of Vulnerabilities and Capacities



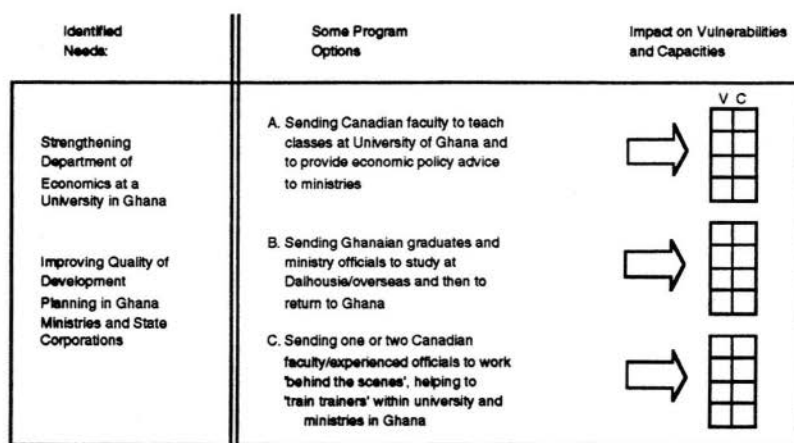
Some 'Capacity-Relevant' Problems

A summary list of some frequently found 'capacity-relevant' problems, as an outcome of reviewing the projects, is now provided, followed by a list of some apparent lessons.

- (1) Lack of experience of many of those involved in the projects (both at Dalhousie and in the partner institutions) in 'capacity building', as distinct from their (often very considerable) disciplinary teaching and research skills;
- (2) Lack of focus on capacity building as a core or integrating objective. There was often no clear distinction made between the 'subject' training, for example, of faculty in the partner institution so that they knew more about a field, as distinct from helping them strengthen the capacity of their organization;

FIGURE 2

Program Options and Their Impacts on Capacities/Vulnerabilities



- (3) Lack of recognition (in operational terms, at least) of the value of multi-disciplinary inputs to all aspects of the project cycle;
- (4) The unconnected nature of much of the international development activity at Dalhousie, despite a growing volume of projects. This was found to be especially the case at the 'professional levels' of activity, as distinct from financial administration and audit control levels. Many of those at Dalhousie, who were engaged on international projects, apparently have felt rather isolated in their academic departments, their faculty colleagues frequently knowing little about international development and appearing to care even less, particularly regarding the Third World. The existence of the Pearson Institute appears marginally to have helped improve matters — largely at a financial/ administrative level, despite periodic efforts to improve professional working links. The Pearson Institute appears to have reached a watershed point in its own early history and some re-assessment of direction was widely suggested. (It is now being undertaken);
- (5) Faculty were found sometimes to have failed to recognize the important role good administrators can and often do play to ensure supporting services and, conversely, administrators were frequently found to have failed to view projects as 'agents for change' and as important elements for academic programming. Instead of viewing each other as members of the same teams, there appears to have been some tendency to put fences around functions in a counter-productive manner;

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- (6) Virtually all faculty working on these projects were also teaching and undertaking research at Dalhousie. Overseas' projects have been, to a large extent, appendages to the faculty members' annual work programmes — fitted in around Dalhousie's traditional schedules as opposed frequently to the optimal times of the partner institutions;
- (7) Greater interest was often found to have been placed on short-term, 'output goals' by the partner institutions (for which they were usually judged in the region), as distinct from their own capacity building needs. Thus a partner institution might be constantly following a pattern of crisis management (for example, requesting Dalhousie to supply a faculty member to teach a class scheduled to start in one week's time), as distinct from implementing a programme to build up local resources adequately to handle new programmes agreed upon with, perhaps, their Ministry of the Environment, CIDA and Dalhousie over a long-term period. Every time Dalhousie responds to such a crisis, the value of the linkage project is appreciated by the partner institution — but, unless care is taken, the cycle is repeated and a dependency relationship becomes re-inforced. There were cases of this, for example, in Nepal and Zimbabwe.
- (8) One serious problem in some countries was the salary levels paid by the partner institution: they have proven inadequate to attract or retain professionals with the kinds of experience and skills required. Merely to engage in staff training programmes, in such situations, has not proven adequate. Far more, it was noted, could have been accomplished in institution building were ways found to improve local salary scale and working conditions, thereby making positions attractive to local people already working in the country, or to nationals who have been enticed (for economic reasons) to work overseas. It has often been far from easy to put this into practice but, without such measures, capacity building in some institutions is unlikely to be sustainable.

At Dalhousie itself, in a period of extremely tight budgets, it was concluded that hiring practices must recognize the kinds of skills and experience required for international work — if the university is going to sustain this work. In many departments that did not appear to have been recognized, with the result that they are unlikely to become more involved in international work of this kind and, as faculty leave, could well become more parochial. In the more successful projects, ways to overcome these problems were found, sometimes in an unorthodox manner — emphasizing the need for flexibility, *within the framework of a strategic plan.*

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Some 'Capacity-Building' Lessons

Among lessons that might be suggested from some of the more successful experiences are:

- (1) While most projects resulted from individual interests, the institutionalization of linkages appears to contribute to sustainability and growth (both at Dalhousie and in the partner country) provided that bureaucratic management systems do not overwhelm individual faculty commitment. Both are necessary. Of particular interest was the step-by-step approach to programme development that has become a part of the project cycle of the International Ocean Institute. Thus, for an example, Elisabeth Mann Borgese wrote "when the programme goes to a new country, a workshop is first planned with local experts so as to focus the programme on the real issues of importance"... "Next year's syllabus [draws heavily on a routine] evaluation;" ...⁵
- (2) To be successful over a longer period, projects were found to require both a long-term vision as well as clearly written and agreed upon management and financial 'game plans'. These plans have needed to be re-assessed routinely through evaluation and planning processes that are not threatening or viewed as of a 'watch dog' character, but are recognized to be genuinely constructive and which draw both upon those directly involved (at all levels) and on experienced outsiders (to the project);
- (3) Systematic documentation and communications have proved essential and require careful planning and the allocation of real resources. Given the complexity of some of the projects, as well as cultural differences between those at Dalhousie and those overseas, communications (including two-way travel) have been notably present in projects with a successful capacity building record. Documentation has fallen into a variety of categories — from financial reporting to internal and published evaluations, to supporting theses and reports by students, to audio-visual materials, all of which were found desirable. Social activities, as components of projects, also must play an important role in cementing commitment — a point well-made in the case of the Tanzanian nursing project;
- (4) From the start, a participatory team approach to project planning and management was found to be essential in both the partner institutions and at Dalhousie. Consistency has been found to be important for

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Consistency has been found to be important for effectiveness...

- effectiveness and, once again, the value of written communication must be noted;
- (5) Dalhousie-appointed field staff frequently were found to have had a difficult 'judgement-call' to make — as between being very visible and obviously 'busy' in the partner country's institution, and being 'behind the scenes' and essentially a 'trainer of trainers or advisers', not the front person himself/herself. This calls for experience, self-confidence and humility. As a general principle, Dalhousie appointed field staff must be helped to feel very much part of Dalhousie, must be given frequent and informed feed-back from Dalhousie, must be given substantial delegated powers of authority ('armchair decision-making' from Dalhousie is less likely to be appropriate for field decisions than the judgement of those actually based in the partner country) and must be treated sympathetically and reasonably generously in terms of benefit packages.
- (6) It has taken particular skills, approaches and experience to be effective in international development activities. The selection of staff (including faculty) and course participants required care and due weight to the importance of social and cultural as well as professional skills.
- (7) In many successful projects, care was exercised to be supportive for spouses and families. For effective capacity building, the interests of the family unit demand attention and not simply those of the individual faculty member or student. This has many implications for funding agencies, such as CIDA, and warrants further study and concerted action.

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Regional Concentrations and Networking

The case for regional concentrations and networking was found to be persuasive, as a key approach to capacity building. The concentration of projects, for one example, through the long-standing EMDI project, resulted both in a network of re-inforcing centres in Indonesia, some depth of understanding of the region at Dalhousie, and a network of links across Canada and Indonesia which have enabled sustenance of that project. The running of regional workshops, for another example, through the International Oceans Institute, built up professional standards and understanding of the imperatives of ocean management and the law of the sea among many officials in the regions targeted. The law of the sea/ocean boundary policy (SEAPOL) project, for another example, resulted in a regional network of experienced officials and ministers sharing expertise and information, with 'the Dalhousie connection' providing continuity and support, at the cost of quite

The case for regional concentrations and networking was found to be persuasive...

modest amounts of Canadian funding. In the cases, for other examples, of Ghana and Zimbabwe, Dalhousie networked very considerably with Canadian government departments and businesses, as well as across the university, to provide instructors in those countries and linked opportunities in Canada for on-the-job training. Moreover, several Ghanaian officials and graduate students, met as a result of the Dalhousie project with Ghana's Institute for Management and Public Administration (GIMPA), later joined with Dalhousie faculty to become key advisors to the Zimbabwe project. In the case of the aquaculture genetics research in Asia, the mollusc research and advisory projects and, most recently, activities with women in development activities that included the Philippines link at Los Bãnos, networking was energetically encouraged. The Gambia projects have been most effectively linked through the formation of the Nova Scotia-Gambia Association.

If regional concentration and networking experiences appear to have been good, why, it must be asked, has this approach not been applied more widely?

Among the reasons appeared to have been the following:

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- The major Canadian funding agency, CIDA, has tended to encourage bi-lateral, country-to-country, relationships. This may now to be changing, yet caution must be expressed about Canadian foreign aid policy at this juncture. Given both the fast-changing situation in Eastern Europe and a new federal government, feeling its way with strong commitments to domestic employment policies, CIDA's mandate is clearly vulnerable;
- Most projects were simply between Dalhousie and one other partner institution — usually for purposes of apparent practicality, given the problems that can readily occur regarding implementation when other partners (and, even more so, other countries) become involved. Many of these 'single' projects started and remained quite modest as to scale and ambition. That does not necessarily reflect badly of them — mere size is a poor criterion of effectiveness;
- Partner institutions periodically wanted to be the only institution with the 'pipe-line' into Dalhousie for CIDA funding; many have not tended to encourage regional 'cooperation';
- Partner institutions have viewed their problems as special to their organization or, when involved in development policy roles, of a confidential nature — not to be shared with neighbouring states;

- Within Dalhousie, faculty interests have frequently argued for 'thematic' approaches and viewed regional ones with suspicion. In practice, there is no good reason for conflict inasmuch as each should readily be able to strengthen the other — provided recognition is given to the importance of multi-disciplinary combinations and provided that the department or centre reaches out to include community partners.

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Regional centres and regional networking promise substantial advantages and warrant more attention.

V. Towards Sustainable Development

Every few years new phrases are coined that reflect the limitations of past labels and seek to infuse new perspectives. 'Sustainable development' is such an example. In many ways, it reflects the 'obvious' — that increased populations, widening income gaps between North and South, avaricious (Northern led and inspired) consumption levels, huge expenditures on armaments, and a relatively fragile environment threaten the survival of the earth as we know it. The Brundtland Report argued:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

- the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and
- the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs" ...⁶

Two questions, given that definition, remain to be asked:

1. Have Dalhousie's 'development' projects promoted sustainability?
2. How might Dalhousie projects become 'more sustainable'?

1. Have Dalhousie's 'development' projects promoted sustainability?

The response to this question can only be mixed. Some projects appear to have been at, or close to, the cutting edges on the theme (particularly the earlier Indonesian work and that of the International Oceans

Institute). Some have very definitely not and, moreover, have operated as if the entire UNCED process had no relevance.

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In a 'public manner' Dalhousie has played something of a catalytic role in arguing the case for sustainable development — drawing on a number of individuals who had provided leadership to several of the projects described in this book. It was in large part building from links in Indonesia, Ghana and Zimbabwe that Dalhousie drew together ideas and resources to host, in co-operation with the International Association of Universities (IAU), the United Nations University (UNU) and the Association of Universities and Colleges of Canada (AUCC), a Halifax conference of universities on Sustainable Development, preparatory to UNCED in Rio.⁷

Out of that Halifax conference were spawned the 'Halifax Declaration' (presented by the President of the IAU and former University of Zimbabwe Vice-Chancellor, Walter Kamba, at a Rio plenary) and a prototype 'university plan of action' (distributed by the IAU to its sizeable membership).⁸

This very book is an outcome of recommendations, in the Halifax conference 'university plan of action', that "Each university might review all university linkage projects to explore how sustainable development elements are being or might be addressed".⁹

Several Dalhousie project links were visible at Rio (for example, the International Oceans Institute group) and a number of individuals, who had worked in various capacities on Dalhousie's linkage projects, represented several government and NGO bodies at the Rio gatherings.

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As a result of the Rio process, the theme for Dalhousie's major annual public lecture series (Killam Lectures) was sustainable development: a key speaker was Jim MacNeill.¹⁰ A number of faculties, including medicine, science, dentistry, law and management studies have sponsored faculty lectures, courses and other activities in response to the Rio initiatives. A few years earlier, when Dalhousie established its institute charged with co-ordinating and encouraging international partnerships, the Lester Pearson Institute for International Development, the opening address had been given by Maurice Strong; his theme was 'The Way to Only One Earth'.¹¹ Dalhousie's commitment to the Rio process was consistent with a pattern already well in progress. At a 'macro' policy level, a number of Dalhousie faculty have been substantially involved in issues of 'sustainability'.

It became evident, in this review, that some of Dalhousie's projects and educational programmes indeed were reaching out — not just to incorporate sustainable development concepts within their existing mandates — but also to promote these concepts on broader canvasses, in national and international conferences, through extending the way

they viewed their own roles and through becoming advocates for sustainable development. This was clearly true, for examples, in the cases of the Indonesian and Philippine projects, and has routinely been at the heart of the work of the International Oceans Institute. Their collective focus has been to develop teams and centres that will both advocate and practise the principles of 'sustainable development' in many corners of the globe. A model of a 'green plan' for the International Red Cross and Red Crescent Movement, now publicly available, was written at Dalhousie.¹² A deliberate infusion of concepts of sustainable development has now become pronounced in the four graduate programmes already referred to (MES, MDE, International MBA, MMM) and was also being encouraged in the undergraduate International Development Studies programme, through an 'Earth Summit' prize, awarded annually for the best student paper on the theme of sustainable development.

However, a substantial number of projects did not appear as yet to have been influenced by concepts underpinning sustainable development; indeed on one occasion the argument was 'conclusively' made that 'it is not in the contract'. While it is probable that the momentum building up at Dalhousie will generate changes in the way more projects are presented in the future, a distinction clearly has to be drawn between the public-relations aspect of popular slogans and what is really being done.

Were a more extensive level of inquiry initiated to encompass a representative cross-section of universities, some reasons for disquiet could be anticipated regarding the interface between the Northern family of universities as a group and their Southern partners. Given the day to day pressures facing the peoples of many developing countries — the lack of clean water in so many urban slums and rural villages, the desperate abuses of human rights, the difficulties of access to basic health care and primary level educational services, and so on — to what extent are the Northern universities encouraging inappropriate systems? Should, for example, they be so energetically promoting (as many are) their own advanced degree programmes to those in some of the developing countries? Should they be constantly sponsoring so many international conferences with their Southern partners? How much, in the form of *real* benefits, trickles to the poverty-stricken from such activities? Or more broadly, what impacts do the activities of the Northern universities have on the allocation of scarce resources to the poorest of the poor? Is their research emphasis on problems of consequence to the longer-term survival of the people's of these poorer nations, or are they encouraging colleagues in Third World nations to believe that 'the research that counts' or, at least, the research that can get funded, and its results published 'in respectable journals', is on the 'more fashionable themes' of interest in the industrial North?¹³

These wider questions warrant disciplined examination. It is not irrelevant to note the recent and unusually self-deprecating report of the World Bank (World Development Report, 1992), in which the Bank

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acknowledges the environmental damage and lack of sustainability of a large proportion of the infrastructure and other projects it has been helping to fund. Universities have a responsibility to assess their own impacts and it is suggested that the International Association of Universities might consider undertaking such a review, perhaps in consultation with UNESCO.

2. How might Dalhousie projects become 'more sustainable'?

Every project can be viewed as a potential 'agent of sustainability' — whether in its message or in its 'material' production role. Particular projects also fit within some form of 'life cycle'. Once a set of goals has been accomplished, the project may appropriately be terminated and/or some new phase or project(s) may be initiated. David Williams convincingly argued the case, from his social work experiences in Guyana, for a 'thick system' of project development aid, by which he meant a series of inter-locking projects, programmes and partnerships. That readily relates to the process defined in Table 1. It must also be noted, however, that a 'thickening' of linkages can readily lead to a deepening of dependency relationships in a manner that can be counter-productive to the very goals of 'sustainable development', the fundamental *raison d'être* of the projects. The challenge is to find the appropriate mix.

The challenge is to find the appropriate mix.

In the context of many Third World nations today, particularly in Africa, some degree of dependency — over a long duration — may indeed be a risk of aid-funded partnerships, but it might also be a reasonable pre-condition for longer-term institutional sustainability. This may be an unpalatable suggestion for donor agencies (and recipients also) even to contemplate as a possibility, but it does have to be admitted and, if true, strongly argues for long-term commitments.

Non-governmental organizations have tended to lengthen their programme strategies as an outcome of their field experience...

Non-governmental organizations, David Korten has argued, have tended to lengthen their programme strategies as an outcome of their field experience in contributing both relief and development assistance.¹⁴ His ideas appear relevant to university programmes and, in Table 1, Korten's basic matrix is extended to incorporate a sample of insights gleaned from the projects discussed in this book. It can be argued that, as those working together on some activities better grasp the implications, so longer-term and more open-ended partnerships can emerge. The key functions of a university are also briefly integrated into this framework — teaching, research and community service — and linked to international partnership experiences.

Some progression was found to have occurred...

Some progression was found to have occurred, in a few of Dalhousie's linkages, from mostly first phase characteristics (see table 1) towards a growing number of third phase attributes. This is not to argue that 'third phase' linkage arrangements are necessarily 'better than' some of the first or second phase links. At the heart of the successful links have always been, as has already been noted, one or two committed and

energetic individuals. Not only may it often be preferable for some relationships to start as 'first phase' linkages, but there can be a valid case for a number of first phase linkages to expand no further — not because they are failures, but because of the nature of the particular activities involved.

Dalhousie's experiences with Indonesia and the work of the International Oceans Institute most readily fit the third generation category, albeit they also incorporate concurrently a number of second phase features. Further analysis of third (and fourth) generation experiences could generate useful insights and these more complex activities would certainly benefit from the design of some basic models as reference points. At this juncture, comparative explorations of a number of different university experiences that fit the 'third generation mould' would appear a useful line for further inquiry. Dalhousie's own experiences are very limited beyond the second generation and it could be misleading to seek to draw further generalisations from such a few cases.

Inasmuch as most of Dalhousie's international linkages currently display first or second generation features, it might be useful to concentrate here on exploring some of the strengths and possibilities of project cycle analysis, a concept promoted by Warren Baum within the World Bank,¹⁵ (see Figure 3). Not only can that framework provide a more disciplined structure for project planning and management than was frequently found to be in use, but it also holds promise as a means for advancing concepts of sustainability. Even when a project is in the early phases of identification and preparation, questions can be asked about its longer-term impacts and sustainability (see Figure 4). Questions also need to be raised about what would happen if the project never gets implemented. It is essential, at each phase of a project's existence, to force out a sense of how success or failure is actually going to be assessed.

Even when a project is in the early phases of identification and preparation, questions can be asked about its longer-term impacts and sustainability.

In Figure 5, a concept that was originally developed by the author for the Red Cross can readily be applied to sustainability. Superimposed on the traditional Red Cross project cycle is a cross, indicating how the 'humanity' goals of the Red Cross can be instilled in all phases of the project cycle and demonstrating that, while many of the normal criteria applied in preparing and analyzing projects still apply, new humanitarian dimensions do need to be infused. For one example, when Red Cross buildings are designed — are facilities for wheel-chairs built-in, such as ramps? For another example, when Red Cross buildings are constructed, are the construction crews themselves provided with first aid training and other such support that the Red Cross could readily and appropriately supply (for example, AIDS education)? A series of such examples is included in Projects for Relief and Development.¹⁶

TABLE 1

***International Partnerships
Three Phases of University Linkages***

GENERATION			
	FIRST	SECOND	THIRD
Defining features	Faculty linkage (often informal and individualistic)	Departmental contract (formal)	Network linkage agreement (formal but also flexible)
Problem definition	Shortage of a particular skill, need for 'technical' data or external review	Single disciplinary mindsets limit project	Institutional and policy constraints
Time frame	Annual	Project Life	Indefinite long-term
Spatial scope	Individual university department(s)	University or one/several government department(s)/local community	National or regional
Chief actors	Individual faculty members	Single departments/centres in both countries' universities/governments/corporations/NGOs	Consortia of universities and public/NGO institutions; occasionally private sector
Teaching	Isolated conferences; single course; graduate student(s)	Routine courses and occasional workshops	degree programmes and regular workshops/conferences
Research	Individual faculty or government department interests	Project research agenda	Complex of flexible, inter-connecting research activities
Community Service	Isolated support activities, normally disconnected	Project service to particular institution	A network of capacity-building activities
Management orientation	Very basic logistics management	Project management	Strategic/programme management

FIGURE 3

Project Cycle

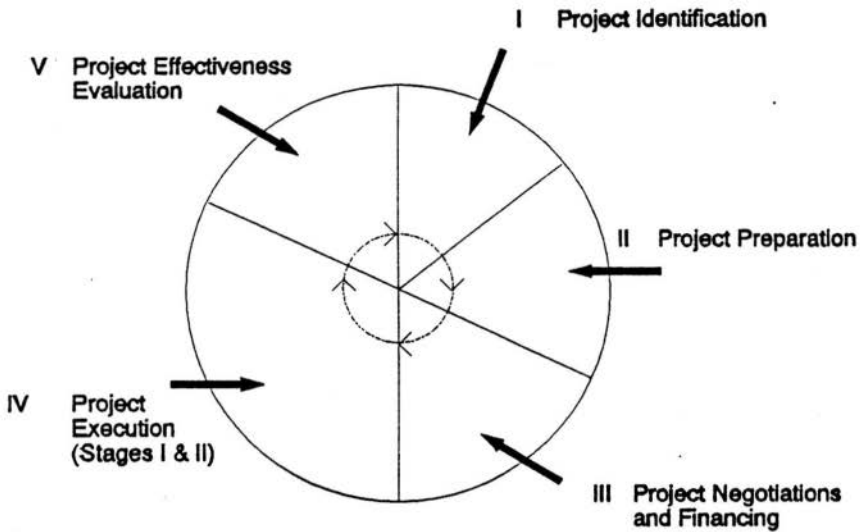
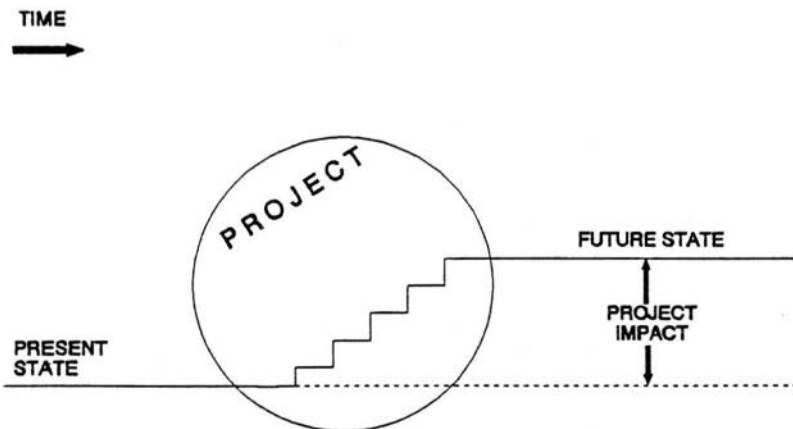


FIGURE 4

The Impact of a Project



Source: Redrafted from Ideas in FINNIDA, *Guidelines for Project Preparation and Design*.

FIGURE 5

Red Cross/Red Crescent Project Cycle

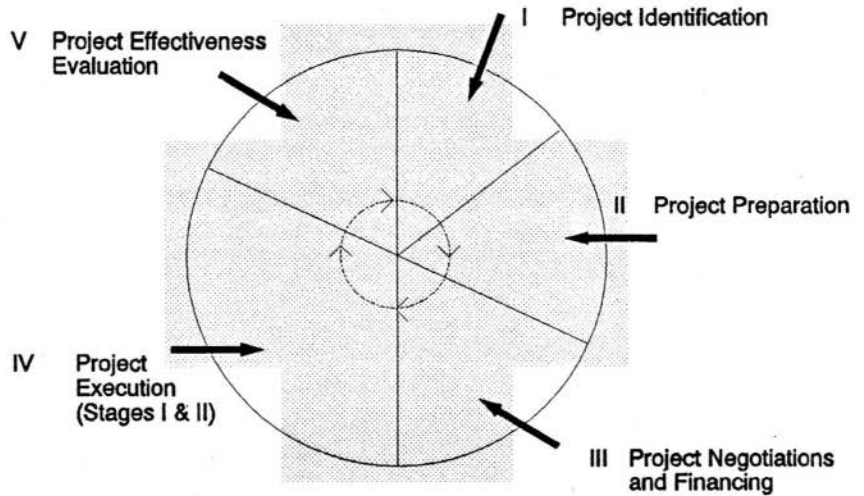
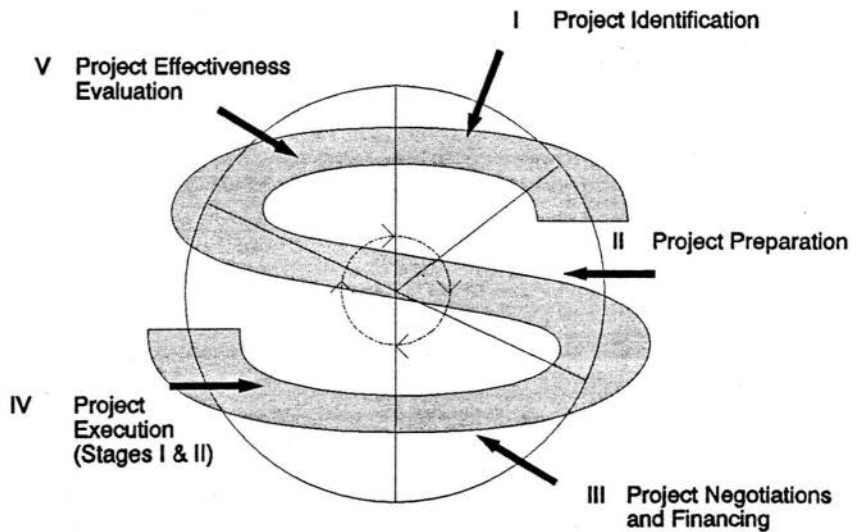


FIGURE 6

Sustainable Development Project Cycle



Following the same approach, in Figure 6 a (green) S has been superimposed on the diagram, instead of a red cross. Sustainability is not a consideration which has implications at but one phase of a project's cycle — it should infuse each phase. Nor should the projects be viewed as 'fenced-in' and 'isolated' activities, but as potentially significant agents, catalysts and advocates of sustainable development. Such an approach was not explicitly or systematically being used for planning or managing Dalhousie's projects; indeed, even a basic project cycle framework was conspicuously absent from most project planning and analysis, in any routine way. It is suggested that it would be useful to introduce such an approach and, at the same time, to explore energetically how linkages might be forged between many of the existing projects — sometimes on a functional basis, sometimes regional and, on occasions, both.

VI. Conclusion

Four points will draw together this discussion:

1. A creative and supportive environment, both at administrative and professional levels, has been found to be necessary for sustaining effective projects. Dalhousie University has clearly made some progress, over the past decade, in strengthening parts of its basic infrastructure. However, particularly given a climate of budget pressures, many of those working on development projects appear to have felt themselves 'on the fringes' of university and departmental 'mainstream priorities' and, indeed, appear in some cases to have adopted defensively independent working styles. A deliberate plan for bringing these various resources together (committed faculty, students, project administrators, development oriented academic programmes and facilities) appears to be one necessary next step towards sustainability.
2. Increasingly projects must be seen as pro-active ingredients of longer-term 'strategic' programmes; as such (within explicit 'project cycle' frameworks), they also need to become more disciplined, and in many cases far more imaginatively built upon. As bridges are more systematically made between project and programme frameworks, so programmes should themselves be viewed as integrally connected to larger networks, particularly but not exclusively of a regional character. The formation of links with particular Nova Scotian communities, NGOs, businesses, government agencies and other educational/research institutions could become more of a routine, each re-enforcing the other. Single source financing should desirably be only for the earlier phases of a project's life, after which a variety of sources should be sought; this would provide greater financial depth and encourage programme

A creative and supportive environment, both at administrative and professional levels, has been found to be necessary...

Projects must be seen as pro-active ingredients of longer-term 'strategic' programmes...

vitality. Dalhousie, it was concluded, has to be challenged to become 'more connected' in its approaches to international development endeavours, bringing closer together its teaching, research, community service and regional development roles.

Partner institutions must not be encouraged to become reflections of Northern universities.

3. Partner institutions must not be encouraged to become (sometimes pale and frequently under-resourced) reflections of Northern universities. They should be encouraged to define and implement their own priorities and roles: their criteria for self-assessment should reflect their own regional priorities, not those of Northern institutions. Northern universities can certainly learn from the situations facing partner institutions in the South and benefit from comparative experiences in their own work; but the approaches to institution building may often need to be substantially different between countries and cultures. Northern institutions can play a role in facilitating South-South relationships, as well as in facilitating research, teaching, community service and student networks. Care has to be taken that Northern Universities do not dictate the program agendas or assume the operational policy and management functions of Southern partners. Dependency over the longer-term has to be balanced by the imperatives of sustainability. In the process of reviewing the Dalhousie linked projects, these issues surfaced on numerous occasions. Not infrequently, the funding agencies (particularly CIDA) were found to be 'drawing the agenda' and the university simply 'fitted in' as an implementing instrument — dependent on (and attracted by) access to funds.

Northern and Southern institutions, including universities, are challenged to combine to understand and respond to these major problems.

4. The world is facing major challenges: some threaten the survival of civilization as we know it. Northern and Southern institutions, including universities, are challenged to combine to understand and respond to these major problems. The design and establishment of new frameworks for strategic alliances are called for. These will often be of a regional nature and will require a variety of disciplinary skills and resources. They present new opportunities for universities, including Dalhousie, to demonstrate a capacity to initiate change.

Some leading universities around the world are quite radically redefining their purposes and institutional structures in order to harness scarce resources more effectively, and thereby to respond to emerging priorities. The United Nations University is pioneering one kind of model; the Open University, the Space University, the Commonwealth of Learning and ideas ingredient in the emerging concept of an International Red Cross university suggest new kinds of models for research, distance education and the linking of research designs and outputs through training — to 'front-line' community service.

For some, at least, of the Southern Nation and Eastern European universities, with which Dalhousie is cooperating, new institutional frameworks are likely to be preconditions for sustainable development. Universities have, in some regions, been accused of being smug, élitist and expensive 'white elephants'. In some other cases, universities have been viewed as mouthpieces for ideological cant. Sadly such accusations have a ring of truth and probably no nation is without at least some uncomfortable examples. Dalhousie itself cannot be deemed immune simply because it is located in Canada. No country's universities are immune.

Dalhousie's international partnerships were found to have provided windows on a world in crisis. A message from this review is that Northern universities are in enormously privileged positions and that it is possible to 'make a difference'. To sustain the role of being credible partners overseas, however, universities must surely be credible contributors to the overall well-being of the peoples in their own regions. To be credible contributors to their own regions, they must bring perspectives from the world beyond.

The last word belongs to Maurice Strong,¹⁷ the moving force behind the Rio Earth Summit and an indefatigable advocate for international cooperation:

"For the first time since human life appeared in this planet, the human species is in command of its own evolution. We are the principle determiners of our own future. We cannot escape the responsibility that this imposes on us. We are therefore compelled to manage the processes which will determine that future so as to provide the security, the opportunity and the well-being for the entire human family which, for the first time in our history, is now an achievable goal. It is also indispensable. "Only one Earth," as it was described in the theme for the Stockholm Conference and the book by that name written by Barbara Ward and René du Bois, can no longer be regarded as a mere idealistic vision. It has become the central focus of human endeavour, the imperative of our common survival and well being on this planet."

Universities have been accused of being smug, élitist and expensive 'white elephants'.

A message from this review is that Northern universities are in enormously privileged positions and that it is possible to 'make a difference'.

We are compelled to manage the processes which will determine that future so as to provide the security, the opportunity and the well-being for the entire human family...

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Acronyms

ACCC	Association of Canadian Community Colleges
AGNA	Aquaculture Genetics Network in Asia
AUCC	Association of Universities and Colleges of Canada
BBA	Bachelor of Business Administration
BScN	Bachelor of Science in Nursing
BSW	Bachelor of Social Work
CBC	Canadian Broadcasting Corporation
CCI	Canada Crossroads International
CCMEP	Canada-China Management Education Programme
CEC	Cobequid Education Centre, Truro, Nova Scotia
CEDA	Centre for Economic Development and Administration, Nepal
CEO	Chief Executive Officer
CIBS	Centre for International Business Studies at Dalhousie University
CIDA	Canadian International Development Agency
CUSO	Canadian University Services Overseas
CUSO-FSO	Canadian University Services Overseas Field Services Officer
CWY	Canada World Youth
Dal	Dalhousie University
DBA	Doctor of Business Administration
DFA	Dalhousie Faculty Association
DSU	Dalhousie Student's Union
EC	European Community
EEZ	Extended Economic Zone. The two hundred mile limit for sovereignty fishing rights.

Acroynms

EMDI	Environmental Management and Development in Indonesia
ENGO	Environmental Non-Government Organization
ERMP	Environmental Resource Management Programme in the Philippines
FIN	Fish Introductions Symposium
FAO	Food and Agriculture Organization
G7	The lead seven industrial nations of the North
GDP	Gross Domestic Product
GE	Genotype Environment
GEF	Global Environmental Facility
GIMPA	Ghana Institute for Management and Public Administration
GNP	Gross National Product
GTTI	Gambia Technical Training Institute
IAU	International Association of Universities
ICDS	Institutional Cooperation and Development Services, CIDA
ICOD	International Centre for Ocean Development
IDA	International Development Agency (the soft loan window of the World Bank)
IDRC	International Development Research Centre, Canada
IDS	International Development Studies (Dalhousie programme)
IEC	International Education Centre, Saint Mary's University
IISD	International Institute for Sustainable Development
IMF	International Monetary Fund
IOI	International Oceans Institute
ISTC	Industry, Science and Technology, Canada
LDC	Less Developed Country

LPI	Lester Pearson Institute for International Development at Dalhousie University
MAP	Marine Affairs Programme
MBA	Master's of Business Administration
MCN	Mussel Culture Network
MDE	Master's of Development Economics
MES	Master's of Environmental Studies
MMM	Master's of Marine Management
MN	Master's of Nursing
MOD	March of Dimes
MOU	Memorandum of Understanding
MSSW	Maritime School of Social Work
MSW	Master's of Social Work
MUCHS	Muhimbili University College of Health Sciences, Tanzania
NAFTA	North American Free Trade Agreement
NGO	Non-Government Organization
NIFI	National Inland Fisheries Institute in Thailand
NRF	Norsk Rodtfe
NSAC	Nova Scotia Agricultural College
NSERC	National Science and Engineering Research Council, Canada
NSGA	Nova Scotia - Gambia Association
ODA	Canadian Overseas Development Assistance
OECD	Organization for Economic Cooperation and Development
OPEC	Oil Producing Economic Consortium
PLC	President's Leadership Class at Dalhousie University
RN	Registered Nurse
SAETF	Southern African Educational Trust Fund
SASEP	South African Student Education Project

Acroynms

SBA	School of Business Administration
SEdC	State Education Commission of China
SEIDET	Siyabuswa Educational Improvement & Development Trust
SIDA	Swedish International Development Agency
SRES	School for Resource and Environmental Studies at Dalhousie University
STD	Sexually Transmitted Disease
SVF	Sor og Vestlansfe
TRACE	Trans-Regional Academic Mobility and Credential Evaluation Information Network
UCCB	University College of Cape Breton
UG	University of Guyana
UN	United Nations
UNCED	United Nations Conference on the Environment and Development
UNCLOS	United Nations Conference on the Law of the Sea
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Education, Science and Cultural Organization
UNICEF	United Nations International Children's Education Fund
UNSI	Union of Nova Scotia Indians
UNU	United Nations University
WID	Women in Development
WUSC	World University Service of Canada
YMCA	Young Man's Christian Association

Contributors

Isaac Abraham is an Associate Professor in the College of Pharmacy at Dalhousie. Originally from Ghana, he is an active supporter of international and local multicultural organizations.

John Benoit is an Associate Professor at the Centre for Public Management, Henson College, Dalhousie University. He has extensive teaching and research experience in the area of fire service administration and currently teaches a course on disaster relief and development.

John Berry, presently a professor at the University of Ottawa, was the vice-president of the Association of Universities and Colleges of Canada--responsible for international cooperation and development.

Patricia Betts is a graduate student in the School for Resource and Environmental Studies at Dalhousie, she expects to graduate with her MES in October, 1993.

Rebecca Brown expects to graduate at Dalhousie in May, 1993 with a combined Honours B.A. in Biology and English. (see Chapter 21)

Lynn Burgess has held various administrative posts at Dalhousie University and, since 1988, has been the administrative project coordinator for the Tanzanian Nursing Education Project.

Howard Clark, a chemist by academic training, is President and Vice-Chancellor of Dalhousie University, immediately prior to which he was Vice-President (Academic) of Guelph University. He has been extensively involved in supporting the international work of Canadian universities.

Fay G. Cohen is a Professor of Environmental Studies at Dalhousie University. Her academic background is in anthropology and law, with degrees from Harvard and the University of Minnesota. Professor Cohen's research interests focus on indigenous peoples and natural resource issues.

Shirley Conover trained as an ecologist and biological oceanographer and is an environmental manager by profession. She spent twelve years in the private sector as an environmental consultant before becoming responsible for the Indonesian, then Philippine, projects at Dalhousie.

Ray Côté is Director and Associate Professor of the School for Resource and Environmental Studies. From 1987-92 he was director of the Marine Affairs Programme at Dalhousie University.

Burris Devanney is Principal of the J.L. Ilsley High School, Halifax, executive secretary of the Nova Scotia-Gambia Association and has worked in educational institutions in Nigeria, Ghana and, most extensively, The Gambia.

Cecil Dipchand is the Director of the Canada--China management education programme at Dalhousie, where he holds a professorship in business administration. He is a co-author of *Financial Management* (Canadian edition) and has published extensively in the field of finance.

William Dotterer graduated with a B.A. in Political Science at Dalhousie and is currently studying for an Advanced Major Certificate. (see Chapter 21)

Roger Doyle is a Professor of Biology, director of the Marine Gene Probe Laboratory, Coordinator of the Aquaculture Genetics Network in Asia (AGNA), and President of the International Association of Aquaculture Genetics.

Ülle Ehatamm is a consultant in the Department of Local Government, Ministry of State, Government of Estonia. Ms. Ehatamm was a participant in the 1992 Baltic Economic Management Training Program.

Kenneth Eyre, presently on mission in Rwanda, is an historian and former member of the Canadian military. He has developed performance and simulation systems in support of United Nations peacekeeping training and operations, as well as is the designer of the Centaurus urban disaster simulator, which is now used by a number of Canadian municipalities.

Heather Fraser-Davey is an Associate Professor, Dalhousie School of Nursing and director of the Tanzania link project.

Robert Fournier is a Professor of Oceanography, Dalhousie University, Associate Vice-President (Research) and Executive Director of Ocean Studies. He is Chair of the N.S. Council of Applied Science and Technology, has held fellowships in Norway, England and Hawaii. He is a regular science commentator on a variety of CBC programmes and has served on a number of national advisory boards and science committees.

Gail Gatchalian expects to graduate at Dalhousie in May, 1993 with an Honours B.Sc. in Biology. (see Chapter 21)

Roy George is a Professor Emeritus at Dalhousie University, having been Dean of the Faculty of Management Studies and Professor of Economics and Business Studies. He has been playing an active role on many of the international projects discussed in this book, including those with Nepal, China, Ghana and Zimbabwe.

Birute Grikinyte is Director of the Office of the Governor, Bank of Lithuania. Ms. Grikinyte was a participant in the 1992 Baltic Economic Management Training Program.

James Hall is a Professor, Department of Earth Sciences, Dalhousie University, was founder and director of the Centre for Marine Geology, is chairperson of the steering committee for the South African Education project and has considerable international experience--including having taught at the University of Ife, Western Nigeria.

Brenda Hewitt expects to graduate at Dalhousie in May, 1993 with an Honours B.Sc. in Biology. (see Chapter 21)

Paul Huber is an Associate Professor in the Economics Department, Dalhousie University and director of the Nepal Project. His research and publications have ranged on subjects from forestry policy in New Brunswick to railroad development in Germany.

Juris Kanels is Under Secretary of State in the Ministry of Foreign Affairs, Latvia. Mr. Kanels was a participant in the 1992 Baltic Economic Management Training Program.

Warwick Kimmins is Dean of Science and Professor of Biology at Dalhousie University--presently teaching biochemistry. As a researcher, he is director of a project with scientists from university, industry and government laboratories who are investigating problems in the Atlantic fisheries. He has served on a variety of task forces and committees related to provincial, national and international education (primary, secondary, science, sustainable development and environmental).

Alexander Kwapong held the chair in development studies at the Lester Pearson Institute, prior to his current post with the Commonwealth of Learning in Vancouver. He was previously deputy vice-chancellor of the United Nations University, Tokyo and, before that, the vice-chancellor of the University of Ghana.

Barry Lesser is Associate Director of the Lester Pearson Institute and currently the coordinator of the MDE programme. He is programme director for the External Affairs supported Baltic Economic Management Programme and has worked in the fields of communications, capacity building and on management training projects.

Jim MacNeill is an international consultant and policy adviser on environment and sustainable development. He is also a senior fellow at the Institute for Research on Public Policy, was a senior advisor to the Secretary General of UNCED, was the Secretary General and member of the World Commission on Environment and Development (Brundtland Commission) and (for seven years) had been Director of Environment with the OECD, Paris. His most recent book, Beyond Interdependence,

is mandatory reading in many Dalhousie classes. The paper in this book was presented as a Killam Lecture, at Dalhousie, in November 1992.

Elisabeth Mann Borgese is a Professor Emeritus of Political Science at Dalhousie, Chairperson of the International Ocean Institute, Malta, was Chairperson of the International Centre for Ocean Development, Canada (1985-92) and is author of numerous books and papers.

Ian McAllister is a Professor of Economics, Dalhousie University. He has served on two royal commissions, been an adviser to a number of Canadian and overseas ministries, as well as with the International Federation of Red Cross/Red Crescent. His most recent book (1993) is entitled Sustaining Relief with Development.

Deidre McKay, joined the Masters of Environmental Studies programme as a Killam Fellowship Scholar. She expects to graduate in Spring 1993.

Eric McKee is Vice President of Student Services, Dalhousie University, in which capacity he has also served as chair of the President's Leadership Class Management Committee, as well as contributed to many international student programmes.

Juanita Montalvo now works with the North-South Institute in Ottawa. She is a graduate of the MDE programme and became President of the Student Union at Dalhousie. Before becoming a Canadian citizen, she was a native of Guatemala.

Douglas Myers is a Professor of Education and Dean, Henson College of Public Affairs and Continuing Education, Dalhousie University.

Gary Newkirk is an Associate Professor (Research) in the Biology Department, Dalhousie University and coordinator of the IDRC supported Coastal Resource Research Network.

Colleen O'Brien is mid-way through her MDE programme and is a native of Alberta. She had previously taught English for a year in the Japanese school system and plans to work on Canadian regional development projects.

Olu Olojede, after graduating with a Masters in Environmental Studies (MES) in 1990, currently spends part of the year in Nigeria and part in Ottawa.

Johanne Peron, at the time of writing, was a student in the International Development Studies programme at Dalhousie. Her participation in the CWY programme occurred in 1984.

Pat Rodee is the Assistant Director (Finance and Administration) of the Lester Pearson Institute. With a background in financial management, Ms. Rodee has played an important role in overseeing the budgets of a number of international projects and very considerably facilitating their progress.

Philip Rosson is a Professor of Marketing and Director of the Centre for International Business Studies, Dalhousie University. He teaches, conducts research and consults for business and government in the field of international marketing.

Jennifer Scott was a fourth year undergraduate student studying for an honours B.A. in International Development Studies at Dalhousie, at the time she made this presentation. Currently she is completing her Master's of Environmental Studies at Dalhousie. The focus of Ms. Scott's thesis is sustainable agriculture in rural Nova Scotia.

Neeru Shrestha is completing her MDE thesis on issues facing sustainable forestry practices in Nepal. Ms. Shrestha has been at Dalhousie for two years as part of the linkage programme with her country. She is a faculty member of Tribhuvan University.

Alasdair Sinclair is a Professor of Economics, Dalhousie University, a former Vice-President (Academic and Research) and has long term interests in international trade and development. Recent work has included World Bank missions in the Caribbean and an advisory training project in the Baltics.

Ryan Stanley expects to graduate at Dalhousie in May, 1993 with an Honours B.A. in History. (see Chapter 21)

A.D. Tillett is Executive Director of the Lester Pearson Institute for International Development, prior to which he was a country programme manager with the America's Branch of CIDA, on secondment from the IDRC.

Fred Wien is a Professor, School of Social Work, Dalhousie University--on secondment, as deputy director of research, to the Royal Commission on Aboriginal Peoples. He has had a long-standing commitment to the welfare of the native peoples of Atlantic Canada and has published in that field extensively.

David Williams is an Associate Professor in the Maritime School of Social Work and the pioneering director of the Guyana linkage programme.

The Halifax Declaration

Human demands upon the planet are now of a volume and kind that, unless changed substantially, threaten the future well-being of all living species. Universities are entrusted with a major responsibility to help societies shape their present and future development policies and actions into the sustainable and equitable forms necessary for an environmentally secure and civilized world.

As the international community marshals its endeavors for a sustainable future, focused upon the United Nations Conference on Environment and Development in Brazil in 1992, universities in all countries are increasingly examining their own roles and responsibilities. At Talloires, France in October, 1990, a conference of university presidents from every continent, held under the auspices of Tufts University of the United States, issued a declaration of environmental commitment that has attracted the support of more than 100 universities from dozens of countries. At Halifax, Canada, in December 1991, the specific challenge of environmentally sustainable development was addressed by the presidents of universities from Brazil, Canada, Indonesia, Zimbabwe and elsewhere, as well as by the senior representatives of the International Association of Universities, the United Nations University and the Association of Universities and Colleges of Canada.

The Halifax meeting added its voice to those many others worldwide that are deeply concerned about the continuing widespread degradation of the Earth's environmental practices now so widespread. The meeting expressed the belief that solutions to these problems can only be effective to the extent that the mutual vulnerability of all societies, in the South and in the North, is recognized, and the energies and skills of people everywhere be employed in a positive, cooperative fashion. Because the educational, research and public service roles of universities enable them to be competent, effective contributors to the major attitudinal and policy changes necessary for a sustainable future, the Halifax meeting invited the dedication of all universities to the following actions:

- (1) To ensure that the voice of the university be clear and uncompromising in its ongoing commitment to the principle and practice of sustainable development within the university, and at the local, national and global levels.
- (2) To utilize the intellectual resources of the university to encourage a better understanding on the part of society of the inter-related physical, biological and social dangers facing the planet Earth.
- (3) To emphasize the ethical obligation of the present generation to overcome those current malpractices of resource utilization and those widespread circumstances of intolerable human disparity which lie at the root of environmental unsustainability.
- (4) To enhance the capacity of the university to teach and practise sustainable development principles, to increase environmental literacy, and to enhance the understanding of environmental ethics among faculty, students, and the public at large.
- (5) To cooperate with one another and with all segments of society in the pursuit of practical capacity-building and policy measures to achieve the effective revision and reversal of those current practices which contribute to environmental degradation, to South-North disparities and to inter-generational inequity.
- (6) To employ all channels open to the university to communicate these undertakings to UNCED, to governments and to the public at large.

Done at Dalhousie University, Halifax, Canada, the 11th day of December, 1991.

(Released at the conclusion of the Conference, December 11, 1991. The text was written by Ivan Head and Walter Kamba in consultation with conference participants.)

"Over the last century, universities worldwide have demonstrated a remarkable competence in the advancement of the sciences and in the development and application of technology. Yet it is in no small part that science and that technology which so seriously threaten and preoccupy us today...Sustainable development, when interpreted in the fullest meaning of the term, challenges the very educational mission of the university and forces us to re-examine the basic precepts of virtually every discipline..."

— *Howard Clark*
*(Opening remarks at the
Halifax Conference on University
Action for Sustainable Development,
December 9, 1991).*



Lester Pearson Institute
for International Development
Dalhousie University
Halifax, N.S., Canada

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