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BETWEEN THE ISSUES

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December, 1980

Office Notes

The few responses we received regarding the idea of "Between the Issues" were generally very positive, so we'll go ahead with the original plans for a bimonthly "BTI" and a semi-annual JUSUN. I can't stress enough how much more efficient BTI is, in terms of time, energy, and expenses; of course, we'll keep JUSUN for annual reports and feature articles which are better suited to a high quality presentation which is JUSUN's style. The current issue of JUSUN which should be coming out any day now will be the annual report, and the next issue should come out in February or March. It will be devoted to various aspects of occupational health and safety. If you have any additional comments re Between the Issues, or suggestions for the next JUSUN, please let us know.

On the topic of correspondence from EAC members, I hope you all realize that we very much look forward to correspondence with members. It is a valuable way of helping us know what your interests are. Also when times get rough, it is very heartening to receive a supportive note from an EAC friend.

----Ginny Point

Upcoming Events

Shopping Centres Reexamined - On Tuesday, January 20, at 8:00 in the Nova Scotia Museum, there will be a rousing discussion about the social, economic and environmental impact of shopping malls. We plan to look at what has happened in Nova Scotia, and in other parts of Canada over the last decade, and will also examine the legislative controls which are now in place, (or could be put into effect) in the hopes of regulating the development of shopping malls.

Mooling for Oil - Will It Spoil the Offshore Environment

The second in our environmental lecture series was postponed due to the first snowstorm of the year - November 18th. My apologies to those of you who didn't hear the notice of cancellation on the radio. It was rescheduled for December 9. The next BTI will include a brief review of that lecture.



Ecology Action Centre

Forrest Building

**Dalhousie University
Halifax, Nova Scotia
B3H 3J5**

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I wish to join Ecology Action Centre and receive free copies of JUSUN, the E.A.C. newsletter.

- \$10 individual membership
- \$25 contributing membership
- \$75 professional membership
- \$100 corporate membership
- \$10 a month for one year
- sustaining membership

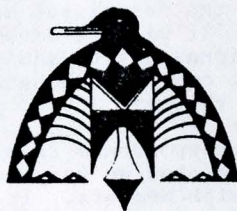
All payments are tax-deductible.

Serials Department
Killam Library
Dalhousie University
Halifax, Nova Scotia
Expiry: May 80

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81

Enclosed in this issue is a stripped down version of the poster which was designed to publicize the entire lecture series. I hope you'll post it in some prominent place in your home. I say "stripped down" because the actual poster is a real work of art. Printed on pale beige

Enclosed in this issue is a stripped down version of the poster which was designed to publicize the entire lecture series. I hope you'll post it in some prominent place in your home. I say "stripped down" because the actual poster is a real work of art. Printed on pale beige paper, the EAC logo is contrasted against an olive green background which was hand silk-screened by EAC member Susan Wakefield. Printed over the entire design is the information about the lectures. We owe many thanks to EAC member Bev Lamb who painstakingly hand letraset the entire text.



General Meeting to Elect Additional Board Members for EAC

Since the November lecture was postponed due to snow, we also had to postpone the membership meeting at which we intended to receive nominations for, and elect a few new members to, the Board of Directors. This meeting has been rescheduled for Tuesday, January 20 at 7:45 p.m. at the Nova Scotia Museum, immediately preceding the lecture on shopping malls.

Urban Committee Notes

Market Place Plaza - We understand that the Planning Appeal Board's decision regarding Market Place Plaza (the eight story office building proposed for the corner of Brunswick and George Streets) can be expected any time now. Until then, we can only wait. The good news, however, is that we had a very successful second hand book sale at the Dalhousie S.U.B. on November 13, which raised \$640. That's more than enough to cover our last debts from the appeal. Thanks to all of you who contributed books.

Halifax Civic Election Questionnaire - The questionnaire which was sent out to each candidate in the recent Halifax Civic Election yielded some very interesting and informative results.

Of those elected, it is noteworthy that only one alderman (Ron Hanson, Ward 8) opposed the continuation of the current city policy of not spraying the trees with chemical insecticides. No elected official was in favour of demolishing the fisherman's market in order to accommodate plans for Chebucto Square by the Water Development Corporation. Wallace (M), Cromwell (2), Wooden (7), and Hanson (8) qualified their opposition to the demolition by adding, "unless a good alternative site is provided." (paraphrased) LeBlanc (10) commented only that he would prefer the market to be located in a large city market housing a variety of other trades and crafts.

All but three of the elected officials supported the idea of amendments to the Zoning By-law which would regulate development on adjoining lots for the purpose of protecting solar access. The three who did not support the notion were Downey (3) and Hanson (8) who commented only, saying that they were not prepared to answer the question at that time, and Hamshaw (12) who did not respond at all.

Unfortunately, the questions relating to zoning for the watershed lands and possible municipal tax concessions for buildings using alternate energy systems were not very clearly written. Hence, the replies were a bit ambiguous, and not worth reporting here.

All but three elected candidates registered their support for legislation which would allow demolition permits to be issued only upon full approval of the replacement building by the Building Inspection Department. The three were Art Flynn (11), who opposed the concept; Don LeBlanc (10), who commented only that it might be necessary sometimes to demolish buildings for purposes other than reconstruction; and Hamshaw (12) who declined to answer in favour of more study.

All those elected supported the idea of civic awards to honour residents who have renovated or restored their properties in an exemplary way.

Lastly, a majority of the candidates who were elected favoured legislation which would require all candidates in Halifax civic elections to declare their land holdings, assets and business dealings at the time of their nomination. Only Hanson (8), Jeffrey (9), Flynn (11) and Hamshaw (12) were opposed.

All in all, the questionnaire was very useful. The urban committee has already begun to look into the question of drafting sample legislation for the issue of declaration of assets by election candidates, which we hope to submit to Council. Also, as previously mentioned, Blair Mitchell and Susan Holtz are working on draft legislation regarding solar access, which will be presented to a variety of municipalities, Halifax included. We also intend to follow-up on the other topics at a later date.

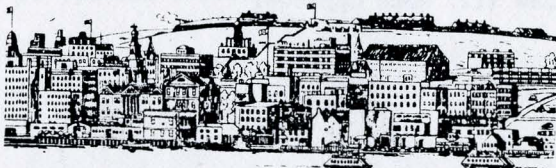
Current Activities - The urban committee is still actively following the issue of the 107 by-pass proposed for Dartmouth; and looking into questions pertaining to a new home for the Atlantic Winter Fair. On a completely different front, we continue to monitor activities of the Waterfront Development Corporation, and we hope to see the reestablishment of a Landmarks Commission in Halifax so that we (and other groups) can present additional buildings for consideration as Historic Resources.

As always, we welcome new members. The committee meets generally every other Thursday at lunchtime.

New Housing Coop Planned for the North End of Halifax

The newly formed James MacDonald Housing Coop is optimistic about CMHC approval to build a thirty unit housing development on Brunswick, Artz and Barrington Street in the North End of Halifax. Cleared years ago for urban renewal purposes, the land is currently vacant. The coop has developed appealing plans for modest new construction which will feature two, three and four bedroom units in a mixture of semi-detached and walk-up buildings. The designers have attempted to make the houses consistent with the existing buildings in the area in terms of scale, design, and materials.

The plans include energy efficient features such as front porches with double doors to serve as air locks when entering and exiting, small windows on the northern exposure and large windows on the south face to maximize solar heat gain, and high insulation values in walls and ceilings. The coop is looking for new members, preferably families with children, and with a total income of about \$10,000 or more. (Spaces for lower income families have already been filled.) For more information, please call the National Housing Association at 422-6033.



Membership Committee of One by Daphne Taylor

I have recently accepted the happy task of keeping track of our family of 600 or more members and I am glad to report that, since our recent appeal, renewals have been coming in thick and fast, for which many thanks.

You might consider the idea of a membership in EAC for relations and friends as a Christmas gift this year. We are offering a free copy of our beautiful poster to all new members over the next little while, and we will be glad to send them one, together with a note to say that the gift of membership is from you. The receipt will be sent to you. Also, people often want to give a small Christmas present to their doctor or dentist - how about a membership in EAC? This is an excellent way of informing members of the medical community about Ecology Action Centre and involving them in areas of mutual concern such as occupational health and safety, or toxic waste management, for example. They too would receive our poster, if given a gift membership.

To try to expand our membership and our budget, Board members have been given the challenge of bringing in two new pledge members, a task they have agreed to take on. We would also encourage our present members to renew their memberships in EAC as pledge or sustaining members; post-dated cheques (\$10.00 a month) are the favourite method of payment for most of our present 40 pledgers. We hope to reach our target of 60 before very long, but we do need your help to do so.

We also have over 100 lapsed members, and gradually I am planning to contact them to jog their memories and urge them to renew. But I do need help. If anyone would like to expand the Membership Committee's complement of one, please phone Daphne Taylor 423-2432 or EAC office 422-4311.



10th Year Anniversary Celebration

In 1981 EAC will be ten years old. We are looking for people who were involved with the Centre way back when it first began, and any others who are interested to help plan something of a 10th anniversary celebration. Please call the office.

On the Energy Front

Susan Holtz just left town today for a major conference on offshore oil and gas development, in St. John's, Newfoundland, after which she will go to Ottawa for the annual general meeting of Friends of the Earth. While in Ottawa, she will meet with the Honourable Marc Lalonde, and with staff at the Department of Energy, Mines and Resources, to discuss energy related concerns of EAC and Friends of the Earth. Unfortunately she did not have time before she left to write out any notes for this newsletter regarding energy issue. (The office has been hopping all this past week.)

She did ask me to report however that the Solar Rights Project is nearing to a close, and that the Municipal Energy Management Study is still progressing well. She will report on both of those in the next issue, along with other energy related issues.

For news on the nuclear front, we've included a copy of the press release issued jointly by Ecology Action Centre and the Maritime Energy Coalition. (see below.)

Joint statement: Dr. Gordon Edwards Nov. 21, 1980
 Jim & Kay Bedell
 Elizabeth May

A nuclear safety cover-up is going on in Canada and the Atomic Energy Control Board's credibility is rapidly eroding, charges Dr. Gordon Edwards, Chair of the Canadian Coalition for Nuclear Responsibility.

Beginning in 1976, when it was discovered that the emergency core cooling system was inadequate, the entire Candu safety system has been called into question by such bodies as the Select Committee on Ontario Hydro Affairs. With an unreliable cooling system, other safety systems such as "containment" and "fast shut-down" have been exposed to more intensive scrutiny by the Atomic Energy Control Board. According to Cape Breton activist Elizabeth May, these systems too have been found so deficient that some Ontario reactors have been ordered to operate at reduced power levels.

The Point Lepreau reactor has been plagued with design problems, construction flaws and, in this past week, the disclosure that there are cracks in the walls of the containment structure. Under emergency conditions, such cracks could leak radioactive emissions into the atmosphere.

A further, and very serious, potential problem is the possibility of a small pipe break which, according to CCNR Chair Gordon Edwards, could lead to an accident similar to Three Mile Island. "The probability of a small pipe break during the expected lifetime of Lepreau is greater than 1 in 4 and could be as high as 95%" says Edwards. "I am basing my calculations on information from A.E.C.B.'s own safety report," he adds.

The decision that a vacuum building - a required safety feature in Ontario reactors - would be too costly at Lepreau, leaves the population within a wide radius at risk of exposure to radioactive emissions, claims Elizabeth May. "The 'dousing' system which has been substituted for a vacuum building is inadequate to contain radioactive gases."

"This is but one example of N.B. Electric Power Corporation's questionable judgment," contend Kay and Jim Bedell of Hatfield Point, New Brunswick. "Now we know that they expect to be able to patch up cracks running through three-and-a-half-foot walls with an epoxy glue mixture!"

"A.E.C.B. has ordered a halt to this type of patching. The question remains: can these cracks be repaired so as to prevent leakage in an emergency. If so, how?"

The Bedells, Edwards and May are all convinced that the situation has passed the point where any internal review of Lepreau's safety would be acceptable. They are agreed that the need is urgent for a complete and independent review of the engineering safety systems and emergency plans by a consulting firm without any stake in Canada's nuclear industry.

"We suggest a firm such as M.H.B. Associates in California, which was retained by the Swedish government several years ago to review the safety of Swedish reactors. Since then, they have also reviewed the safety of Italian reactors.

"Errors must be corrected before the reactor is fueled or operational. Ignoring the problems won't make them disappear. Adequate emergency plans must be developed. The costs, just in economic terms, will be significantly higher if repairs have to be undertaken in a highly radioactive environment."

"Premier Hatfield has urged Maritimers to trust the Atomic Energy Control Board," says the Bedells. "Ontario residents are not all persuaded by appeals to trust in the Control Board. For instance, Toronto City Council passed a resolution asking that all four Candu reactors in Pickering be forced to operate at

reduced levels. Perhaps the nuclear industry is hoping to take advantage of Maritimers' inexperience with the technology."

Moreover, A.E.C.B. itself has been severely criticized by such bodies as the Canadian Law Reform Commission, the Porter Commission, the Ham Commission on Uranium Mining and, most recently, the B.C. Medical Association.

L.L. Bean Supports Nuclear Power

You may want to think twice before ordering one of those wonderful flannel shirts from L.L. Bean's mail order catalogue as a Christmas present for your best friend. According to the September 1980 issue of Groundswell L.L. Bean contributed \$5,000 to the "Save the Maine Yankee Fund" prior to the recent referendum in Maine regarding the Maine Yankee nuclear power plant.



REGIONAL
ECONOMIC
EXPANSION
(DREE)



NOVA
SCOTIA
HOUSING
COMMISSION

ENERGY/ENTERPRISE N.S.

The first three units of a 10 unit construction program of energy efficient houses have now been completed on Taramaki Drive in Forest Hills. The units incorporate the latest technical advances in energy efficiency including super insulation, sealed vapour barrier, heat exchangers, gas or oil furnaces, wood fuel adaptability, low maintenance, high quality windows and other fuel savings features. The units are now for sale and can be viewed at an Open House scheduled for every Sunday between 2 p.m. and 4 p.m. Further information is available by calling 463-1114 or 434-4769.

The energy efficient housing program is jointly sponsored by the Nova Scotia Housing Commission, the Nova Scotia Department of Mines and Energy and the federal Department of Regional Economic Expansion.

P-378

Agriculture Notes

"Ottawa, October 23, 1980--Agriculture Minister Eugene Whelan today announced that tests conducted by Agriculture Canada have identified previously unrecognized contaminants in some samples of the herbicide 2,4-D.

"Scientists in Agriculture Canada's Food Production and Inspection Branch, using state-of-the-art technology, have found that some 2,4-D products contain dioxin contaminants....

"'A decision on how our new findings will affect the permitted uses of 2,4-D will be made before the 1981 growing season,' Mr. Whelan said.

"The herbicide 2,4-D is used to control broad-leaf weeds in everything from lawns to cereal fields. About eight million pounds of 2,4-D is used in Canada each year. This represents about 25 percent of the total herbicide use."

The above quotations are drawn from a press release issued by Agriculture Canada on October 23, 1980.

2,4-D is a phenoxy herbicide which kills certain plants by disrupting the normal pattern of cell growth. Through the manufacturing process, it can be routinely contaminated with dioxin, one of the most toxic man-made substances. In fact, the United States Food and Drug Administration reported that dioxin is 100,000 - 1,000,000 times more potent than thalidomide. It is a suspected carcinogen and teratogen (causes birth defects).

This announcement by Agriculture Canada is extremely disquieting. However it does provide the necessary documentation for the Department of Agriculture to take a very serious review of 2,4-D.

What You Can Do

The Federal Department of Agriculture and the provincial Department of the Environment are both responsible for licensing compounds such as 2,4-D. You can help show your concern by writing your MLA; Nova Scotia Environment Minister Fisher Hudson; your local MP; and the Federal Agriculture Minister Eugene Whelan, to urge a total ban on further use of the chemical 2,4-D. For more information, contact the office.

Travelling Van/Workshop

It is possible to cultivate healthy, productive crops without relying on chemicals such as 2,4-D or chemical fertilizer. The Agriculture Committee is further refining the idea of the travelling workshop which would tour around Nova Scotia showing films and providing the grounds for some lively discussions on the topic of sustainable, non-chemically based agriculture. If you live outside of Halifax and would be interested in having some input into the organization/operation of the van's visit to your community, please call Peggy Hope-Simpson at the office.

We are also trying to pull together a list of organic gardeners/farmers in the region. We'd like to know what your approach is and how well it has worked. If you are willing to share your experience with others, we'd like to try to establish a loose system by which people with similar interests can keep in contact with one another.

Let us know also if you are interested in selling organically grown produce. We are trying to develop a list of interested buyers. Thanks.

The Land of Milk and Money

This is the title of the National Report of the People's Food Commission. It is an excellent report (103 pp) based on submissions given by some 5000 Canadians. The report includes several case studies documenting the increasingly powerful role played by large corporations which control much of our food production and processing systems in Canada. This trend towards corporate control is seen as a major obstacle blocking efforts by many to achieve a more responsible and representative food industry. The report includes a short reference to EAC's presentation at the hearing regarding the need for sustainable agricultural systems. It sells for \$6.25 from People's Food Commission, 321 Chaple St., Ottawa (\$5.50 if you made a submission at a hearing). It is also available at Classic Bookstores for \$6.25.



Recycling Update

In the last Between the Issues we ran a copy of the press release which announced the demise of the recycling service, and suggested that the City become more actively involved with the question of paper recycling. We hoped that the City would issue a proposal call asking for submissions by all parties interested in contracting with the City for the right to pick up paper in Halifax. The proposals would indicate the method and days of pick-up, the type of publicity campaign, and the types of paper collected. The City could then choose the best proposal and contract out the service accordingly.

There are three main advantages to this proposed system. First, the successful bidder would have exclusive rights from the City to collect the paper in a method which is well coordinated with the City garbage trucks. The chosen bidder would also have the opportunity of knowing that no other private concerns or individuals would have the right to collect paper left out on the curb, paper for which he has advertised. This eliminates the problem which EAC had several times last year whereby paper left out for EAC was, in fact, collected by someone else before our truck arrived. The second advantage is that residents would be assured of a regular, well advertised paper collection service. The third advantage goes to the City of Halifax. With a regularized service, more people would be likely to participate, thus reducing the volume of solid waste at the landfill and extending its lifetime.

We have written to City Council, specifically urging them to seriously consider this proposal. The matter has been referred to staff.

What can you do? If you support this idea of a tender call, you can call or write your alderman to show your interest. Each letter counts.

Also: for those of you who contributed to last year's appeal for funds for the recycling operation, I should report that the money is still "in trust". It will stay there until we ask your permission to put it towards some other specific need. We will send tax deductible receipts at that time. Until then, if you want your money refunded, please let us know. Thanks.



ECOLOGY ACTION CENTRE

ENVIRONMENTAL LECTURE SERIES 1980/81

Being held at the Nova Scotia Museum, Summer Street

On the 3rd. Tuesday of each month (except December)

8 PM

Thursday October 30

St. Margaret's Bay

HUMAN EFFECTS ON A MARINE ENVIRONMENT

What has been the impact, pro and con, of such human enterprises as the lobster fishery, tuna farming and causeway building? What we can learn from a study of the Bay has direct application to other provincial environments.

Tuesday November 18

Moiling for Oil

WILL IT SPOIL THE OFFSHORE ENVIRONMENT?

Is there a darker, less euphoric aspect to the anticipated oil boom.... or is that just a gloomy suspicion with no basis in real fact? CBC science commentator Bob Fournier addresses the issue.

Tuesday January 20

Shopping Malls Reexamined

'Twas the month before Christmas and all through the Malls, Not a creature was resting, not even the dolls' but on Main Street, the stores were deserted. We will look at the social and environmental impact of shopping malls.

Tuesday February 17

Health Hazards of Mineral Mining

Mining and quarrying, whether for gold or uranium, carry with them the risk of a variety of health hazards from radiation exposures to arsenic poisoning. A panel of speakers will consider some of them.

Tuesday March 17

Urban Gardening (farming)

There are many ways of producing food in the city: indoors and out, in gardens, pots, plots and cooperative mini-farms. Learn about some of the problems and possibilities—you might be surprised.

Tuesday April 21

Ecological Agriculture

AT HOME AND ABROAD

Chemically-based agricultural practices are increasingly questioned for economic as well as environmental reasons. This evening will feature slides and discussion about ecologically sound practices in China and Nova Scotia.

Tuesday May 19

Occupational Health

TOXIC CHEMICALS IN THE WORKPLACE

Many people are exposed to hazardous chemicals in their daily work and the issue has sparked attention among labour unions as well as environmentalists. The lecture will treat some of these occupations and consider the notion of 'acceptable risk.'

Tuesday June 16

Environmental Law

Which department of which government has jurisdiction over what? What legal remedies are available for people who want to prevent or correct environmental problems? This seminar will touch on some of the main considerations of environmental law.





EAC Logo by Susan Mayo

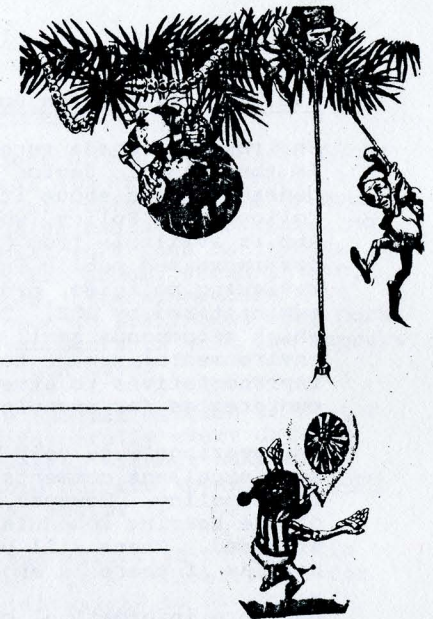
Way back in 1977 we thought it would be useful for Ecology Action Centre to have a picture symbol or logo that would clearly express the ideals and goals of the group.

I approached Zo Lucas, a young graphic artist here in Halifax, with a few rough sketches of a White Pine tree drawn by Susan Holtz inside a circle and from these she designed our present logo which was officially accepted by the Board of Directors in 1979. When Zo first gave us the symbol I went around and asked people what they liked about it, thinking one day I'd write a short article for JUSUN, ask for more comments and then get the Board's approval! The comments, no matter what the historical sequence, are worth sharing: "Simplicity...clarity...as if it were derived from or had its 'roots' in the Peace Symbol...organic...it looks like seaweed...dynamic... security and trust...wood-fired energy...decentralization...the circle of eternity: no beginning, no end...the Chinese yin-yang symbol for male-female, dark-light, land-sea; the tree symbolizes land-use planning...it looks like a face with two eyes and a nose and a brain on the top."

We chose the recognizable image of a tree because it is natural and not abstract. The Centre takes on practical issues and is not concerned merely with theory and policy. Moreover the issues are of local and important significance. We stay close to where we are rooted, as it were. The frame of the logo is the theta, θ , the eighth letter of the Greek alphabet and an international symbol for ecology.

It is interesting to note how coincidentally close our EAC symbol is to the logo for Branching Out, a Canadian feminist quarterly (which recently stopped publication due to financial difficulties). The feminist movement has several links with the environmental movement, including these two logos.

Let us hope that the spirit of our logo is carried into action here in Nova Scotia through Ecology Action Centre.



Enclosed is \$ _____
for a gift membership in
Ecology Action Centre to the
following person:

To: Name _____
Address _____

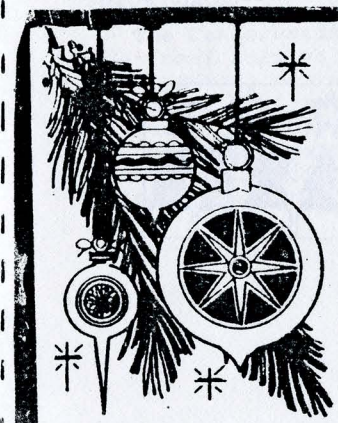
Telephone _____

From: Name _____
Address _____

Telephone _____

We will send you a tax deductible receipt for your gift. Our new member will receive a free poster from Ecology Action Centre and a note to say that the gift membership is from you.

Merry Christmas!



Public Participation Policy - Environment Canada

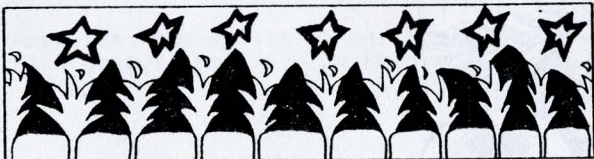
Environment Canada recently held a series of meetings in the Atlantic Region to hear comments from the general public about its draft Public Participation Policy. The Policy, which is about four pages long and is available from DOE by calling 426-7990, calls for increased public input into the process of reviewing policies, programs, projects and regulations administered by DOE. There is also a short provision which recommends small amounts of monies to eligible environmental groups to reduce travel expenses for representatives to attend meetings, hearings or conferences for example.

The hearings were very productive in terms of airing some excellent comments and criticisms regarding the draft policy. However, due to extremely short notice of the hearing schedule, they were rather poorly attended. There will be an additional hearing in Halifax if there is enough interest.

For more information, call Susan Holtz or Ginny Point at the EAC office. We can provide a copy of notes from a meeting in Moncton at which representatives of environment groups reviewed the draft policy prior to the hearings.

In line with the draft Policy, DOE has begun to invite environmental groups like EAC to meet with representatives of various departments within DOE. There have been two such meetings so far - with the Air Quality Branch and the Environmental Conservation Service, each coinciding with regional internal departmental reviews. Judging from those meetings, there appears to be a genuine desire on the part of many of the representatives of DOE who were at the meetings to become familiar with environment groups and to recognise our numerous concerns. This is a welcome development in terms of improved working relationship between DOE and the various environmental groups.

--Ginny Point



Urgent Appeal for Volunteers/Workers

Last week, Bessa Ruiz, President of EAC's Board of Directors, sent out an urgent appeal (to members living in reasonable proximity to Halifax) asking members to donate some time and energy, on a regular basis if possible, to our basic but absolutely crucial work such as typing, filing, answering letters and the phone, stamp licking, etc. In response to her letter, several members have offered to come in to help. But we still need many more. As Bessa said, "Ecology Action Centre is what the members make it." Please call if you can help.

At this point, I want to give special mention to Walter Plaut who has been coming in faithfully every day for two hours over the last six weeks. Without Walter, we wouldn't have been able to send out the appeal for more help! Thank you so very much, Walter.

One problem we face is that the office is so busy (in terms of telephone calls, meetings and interviews, for example) that it is next to impossible to do any work which requires quiet thinking - preparation of briefs, detailed bookkeeping and so on. As a result, all three staff people are behind.

For the next month or so, could we ask that mornings be considered "quiet time" so that we can attend to our backlog of work, while leaving afternoons open for meetings, phone calls and day to day work? Thanks. Also, we are thinking about installing a tape recorder answering service which can take messages when the office is empty. If anyone has such an item and wants to donate it to the Centre, it would be a wonderful Christmas present.

Poster Sales

- We are now offering our "Little Planet" poster for \$2.00 plus handling. It's a great Christmas gift.

- The Conservation Council of New Brunswick, the National Survival Institute and S.P.E.C. are selling a wonderful poster illustrated by John Bianchi of Harrowsmith fame. Entitled "Welcome to the Conserver Society," it depicts an old house being adapted for a conserver society family (i.e., super insulation, storm windows, compost pile, recycling bins, garden plot and so on.)

Conservation Council of New Brunswick
180 St. John St.,
Fredericton, N.B. E3B 4A9

St. Margaret's Bay - Human Effects on a Marine Environment
by Ginny Point, based on a full length report submitted by Anne Brimer.

The first in our 1980-81 environmental lecture series was very successful judging from the number of questions generated and the desire of many in the audience to continue informal discussions until past 10:30 P.M.-- we usually close at about 10:30 P.M. The event featured three speakers: Rennie Smith, president of Whynacht's Cove Environmental Society; Jay Ettman, resident of Seabright and president of Janel Fisheries (a tuna farming operation); and Bryan Michaud, a marine biologist from Dalhousie University. (For those of you who missed the event, we have tentatively scheduled a video tape showing of the lecture for Tuesday, January 27, in the Tantallon Jr. High School at 8:00 P.M. Please call the office for confirmation.)

Rennie Smith devoted his talk to the problem of silt build-up in Whynacht's Cove. Apparently the upper basin of the cove has been virtually filled in with silt; boating channels are being blocked; and the shoreline is advancing into the cove. In addition to natural factors such as silty soil to begin with, and particular tidal patterns, Mr. Smith cited several human factors which are responsible for problems of silt build-up: causeway construction; rerouting of fresh water outfalls for the Nova Scotia Power Corporation's power station; and increased house building. It is noteworthy that sixty-five percent (65%) of the homes in the cove were built since 1950. Land excavation for construction purposes has caused significant erosion into the bay.

One solution he suggested was to build a bridge at the causeway which would allow for a flushing out of the silt. This is being studied by the Department of Environment. Construction practices should also be more closely monitored.

Jay Ettman then described some of the positive impacts of human activities in the Bay. His tuna farming business appears to have generated a good measure of economic prosperity to the Bay in terms of new jobs created in the business, as well as spin-off jobs in the mackerel fishing industry. Instead of leaving for jobs elsewhere, young men from the Bay now have the option of making a living as fishermen. (Mackerel are fed to the impounded tuna for about two months prior to slaughter.) Ettman also feels that his business is much more environmentally appropriate than most tuna fishing operations. Whereas the Japanese long liners and American seigners catch a substantial proportion of pre-

spawning tuna (9,000 - 10,000 per year), the tuna which Ettman catches in Saint Margaret's Bay are generally twenty-two to twenty-five years old, close to the end of their expected lifetime.

Ettman's respect for the remarkable tuna was readily apparent during his talk. Capable of swimming a distance of 50 times its body length in one second, the tuna make their annual migration from their spawning grounds in the Gulf of Mexico, up the Atlantic coast where they stop in St. Margaret's Bay in pursuit of mackerel and herring, into the Gulf of the Saint Lawrence, whereupon they cross the North Atlantic to Denmark, before going south to the Azores and back to the Gulf of Mexico. It seems that Mr. Ettman has made every attempt to develop an environmentally appropriate business which provides a significant boost to the local economy.

The last speaker, Bryan Michaud, explained that under normal circumstances in a marine eco-system there is a self-sustaining balance between the photosynthetic plants such as kelp and other seaweeds (primary producers), which are eaten by sea urchins, snails and periwinkles for example (herbivores), which in turn are eaten by lobsters, crabs and finfish primarily (carnivores), which die and decompose, and return their nutrients to the seawater, for uptake again by the primary producers. Seaweed also provide a protective habitat for young lobster fry and such.

If any part of the system is altered, the balance can be disturbed. Mr. Michaud said that in recent years there has been an overabundance of urchins, causing overgrazing of the kelp beds. This in turn resulted in less protective cover for the lobster fry which lead to higher mortality of young lobster and so on.... The situation has deteriorated to the point where the sea floor is barren of kelp and covered with expanding urchin populations all along the eastern and southern shores from Cape Breton down to Cape Sable. There is considerable concern that this condition will spread to Yarmouth. As recently as 1968, the kelp beds were healthy in Saint Margaret's Bay.

Mr. Michaud declined to speculate as to the cause of this imbalance; however he did suggest that human factors could be significant contributors. Increased fishing pressure for lobsters, finfish and crabs could have caused a change in the normal predator/prey relationship between these carnivores and the urchins. Pollution by fecal wastes or chemical toxins and the construction of causeways could also have effected the health of the various organisms.

Whatever the cause, Mr. Michaud hypothesized that now, due to the existing urchin barrens, the system is one hundred times less productive than when the kelp were present. Scientists are now looking into methods of regenerating the kelp beds and restoring the ecosystem back into a normal balance. Any attempt to do so would be extremely difficult and would not yield any visible results for many years however. After all, it takes approximately 8-10 years for a lobster to reach maturity under normal conditions.

These three views of a typical Nova Scotia bay remind us very clearly of nature's delicate balances and of the necessity to consider ourselves as part of that balance.

Peace Building

Ploughshares Project Nova Scotia, following its very successful Seminar at St. Mary's International Education Centre, Oct. 24/ 25, is laying basis for further outreach to the public, government and military. Goals being talked about are:

- Maintaining peace
- Prevention of wars of oppression
- Protection of human rights

Three action groups are being formed and members and attenders are being invited to join one of these:

- Public education & Research
- Education in the schools
- Political action and policy planning

An Effectiveness Training Session is being planned for late January or early February, led by Murray Thompson from Ottawa Ploughshares.

An Ecumenical or Interfaith religious service is also being planned for a Sunday during the Week of Prayer for Christian Unity, January 18 to 25. For more information phone Daphne Taylor (423-2432), Peggy Hope-Simpson (422-6929) or Jim Morrison at the International Education Centre (422-7361).

EAC Auction

At the annual general meeting last year, we had a very successful (and fun) fundraising event. If you purchased an item or service, but have not yet collected it, you should think about doing so soon. Otherwise the person who offered the item might just offer it to someone else at another auction! If you lost the name of the person to contact, call the office. We have a listing of who bought what from whom. The only item I didn't record was the one which I donated! Larry, I know you purchased my bicycle cleaning clinic, but I don't know your last name! Please call if you are still interested.

Acid Rain: The Burning Question*

*(Note: Amir Nevo, from Grade 6A at Clayton Park Junior High School thought up this title for a presentation to his class on acid rain. It is reprinted with his permission.)

Tests now indicate that the precipitation which falls on Atlantic Canada is typically about ten to fifty times more acid than uncontaminated rain or snow. The acidity is in the form of sulfuric acid (H_2SO_4) and nitric acid (HNO_3) which originate from the oxidation of sulfur and nitrogen from mineral ore smelters, oil refineries, thermal generating plants and automobiles. The effects of acid rain can be devastating to many species of plants and animals.

On October 24 & 25 in Moncton, New Brunswick, the Conservation Council of New Brunswick and Ecology Action Centre jointly sponsored a conference intended for the general public to address this question of acid rain. What follows is a brief review of the conference. (We are also preparing a full length report of the conference proceedings which will be available after Christmas upon request for the cost of xeroxing. The package of information which was distributed to all conference participants is also available upon request for \$5.00. It includes reprints of several key articles on acid rain, and an excellent book entitled, Acid Rain: The Silent Crisis by Phil Weller and the Waterloo Public Interest Research Group (88pp) which gives a comprehensive overview of the issues.

The Environmental Protection Service has estimated that a full thirty percent (30%) of the acid rain which falls on Atlantic Canada also originates here in the region. The remaining seventy percent (70%) comes largely from the industrial heartlands of the United States and Canada, and from the Eastern Seaboard. Automobiles are responsible for about forty percent (40%) of the total acid rain problem in North America.

The pH value of acid run-off water into lakes and streams differs according to the buffering capacity of plant foliage, soil type and geological structures in each ecological community. In many regions of Atlantic Canada, the pH level of receiving waters remains at a critically low level of 4.0 - 4.5, due to thin soils, poor vegetation and granite bedrock.

At a pH of five or less many species of aquatic life are unable to survive. This includes fish such as the Atlantic salmon, and a variety of phytoplankton and zooplankton. In field and forest, rain water with a pH of four or less can cause lesions in plant epidermis, wipe out entire colonies of microorganisms living on the plants, affect plant reproductive systems and leach nutrients from plant leaves.



Decomposing bacteria in the soil and in freshwater are increasingly incapacitated as pH levels drop below four. Low pH values also make soil nutrients decreasingly available to the plants, due to chemical changes in the soil. These conditions lead to reduced nutrient uptake by plants and hence, reduced yields. And once the ecological balance of an area is seriously upset, it is impossible to predict how long it will take for the balance to reassert itself.

Acid rain is also known to leach out heavy metals in the soil such as lead, aluminum, or mercury for example, as well as other toxic chemicals such as PCBs. Thus, acid rain can lead to increased quantities of these toxins entering the food chain, eventually to contaminate a wide range of plants and animals.

The combination of these effects results in a general weakening of plants and animals, and an increased susceptibility to disease or other external hardships. Acid rain may thus be a contributing factor in the spruce budworm syndrome, or decreased forest yields.

Technological controls are readily available to reduce sulfur emissions from tall stacks by about 90 - 95%. Commonly called scrubbers, they add an additional 10-20% onto the normal costs of building a coal fired generating plant. Although required on all new coal burning plants in the United States, there are no such scrubbers in Canadian electric generating plants, nor are scrubbers included in the designs for the proposed new coal burning plants, Lingan III & IV, to be located in Cape Breton.

The preferred method of controlling sulfur emissions according to the Nova Scotia Power Corporation is via a system called Fluidized Bed Combustion. Unfortunately such systems are not yet commercially operable for large scale plants. The Power Corporation hopes to have an experimental fluidized bed plant by the mid 1980's.

The provincial government has primary responsibility for regulating air quality. However, according to the National Clean Air Act of 1971 and subsequent amendments, the Federal Government is authorized to recommend national air quality standards for adoption by the provinces. If and when Canada and the United States commit themselves to some kind of international treaty regarding acid rain, the Act will also empower the Federal Government to impose standards for sulfur and nitrogen emissions on the provinces.

In August of this year, Canada and the United States signed a Memorandum of Intent regarding acid rain, which proposed that formal negotiations begin next June. Unfortunately, with Ronald Reagan soon to move into the White House, and a more conservative, big-industry oriented Congress in the United States, the chances

of signing an acceptable treaty in the near future are becoming increasingly remote, unless there is significant public pressure to do so. In fact, the situation may even deteriorate because the regulations pursuant to the United States Clean Air Act are scheduled for a review this year. There are reports of an extensive campaign in the United States by industry, lobbying for a relaxation of standards.

What You Can Do

The important point to remember is that the technology now exists, and at a reasonable cost, which can substantially reduce sulfur and nitrogen emissions. We are urging you as members and friends of Ecology Action Centre to write to your local MPs and MLAs, as well as to the Nova Scotia Environment Minister Fisher Hudson, and the Federal Environment Minister John Roberts, regarding the need for provincial and federal standards for acid rain. We are also encouraging people to write to Energy Mines and Resources Minister, Marc Lalonde to ask that federal subsidies for new coal burning electric generating plants be withheld unless the plants meet strict sulfur emission controls. Each letter helps enormously.

If you would like to help work on a letter writing campaign, please call Roger Davies at the Centre.

----- Ginny Point

Courses offered by Part-time Studies and Extension,
Dalhousie University
(To register, please call Part-time Studies at 424-2375.)

- 1) WIND AND SOLAR ENERGY - Tuesdays, Feb. 3 to March 10 -
7 p.m. - 9 p.m. in Room 101, Dunn Physics Bldg.
There will be three sessions of theoretical and practical information on developing solar energy. A resource person from the Nova Scotia Agricultural College will discuss practical ways farmers can harness solar energy using 'around the farm' equipment. Three sessions will provide theoretical and practical information on wind energy. Instructors are Dr. David Gobel and Dr. Brad Blackwood of the Dalhousie Physics Department. There is a nominal fee.
- 2) AQUACULTURE - Wednesdays, January 7 to February 25 -
7:30 p.m. - 9:30 p.m. in Room 2970 of the Life Sciences Bldg.
This course would be ideal for people considering starting an aquaculture venture in Nova Scotia. It consists of eight lectures and discussion and will describe existing and possible ventures in Nova Scotia as well as some undertakings in other parts of the world. Some practical problems involved in starting up aquaculture will be explored. The instructor is Gary Newkirk, Biology Dept., Dalhousie University. Registration fee is \$50.

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