

Welcome to the MMM Class of 2009-2010

MAP welcomed the incoming MMM class in early September. This year, the MMM class of 2009-2010 is made up of 8 full time and 3 part-time students along with 3 continuing part-time students. Members of the class are from the US (New York and Virginia), Malaysia, St. Lucia and of course, Canada (Ontario, Nova Scotia and British Columbia) and have backgrounds in economics, history, geography, fisheries, environmental management and security. There have been 4 field trips this term, 3 of which are described later in this issue.

The students are busy this week with the final assignments of the fall term.



MMM students on the Halifax Harbour for the annual class exercise on October 1. Front (L-R): Mairi Edgar, Julie Whale, Erin Mutrie, Sarita Williams Peter, Jess McCluney, Andria Logan, Tun Min Poh. Back (L-R) Dan Pujdak, Mark Chupick, Jenna Boon, Joe Collins, Jimmie Gillis.

This is the second year of scholarship support by the PROGOVNET project for 3 students from the Caribbean region to study at Dalhousie. The PROGOVNET project is supported by the Nippon Foundation of Japan. The students year are Sarita

CALL FOR APPLICATIONS:

Master of Marine Management (MMM) degree

The Master of Marine Management (MMM) is a one year professional, non-thesis and interdisciplinary graduate program designed for students who want to address solutions for marine management problems with interdisciplinary synthesis and integration through teamwork in research and planning.

Visit the MAP website for more information on the program, Applications are due **31 January 2010** for fellowship consideration, and **28 February 2010** otherwise: <http://marineaffairsprogram.dal.ca/>. Please direct enquiries to Becky Field, Administrator at: marine.affairs@dal.ca or: 902 494 3555

Williams-Peter, St. Lucia, studying the MMM program, and Kerith Kentish, Anguilla, and Johanan Lafeuillee, Grenada, studying in the LLM program at the Schulich School of Law.



The Annual MAP Welcoming Reception for the 2009-2010 MMM class was attended by students, faculty, staff and MMM alumni. Pictured above are PROGOVNET scholarship recipients (L-R): Sarita Williams Peter, Kerith Kentish, June Ferguson (PROGOVNET Administrative Assistant), Johanan Lafeuillee and Alexcia Cooke, UWI PhD Candidate.

Alexcia Cooke, ELAP Scholar

MAP is hosting Alexcia Cooke, an exchange PhD student from the University of the West Indies Cave Hill Campus where she recently commenced her PhD research on the governance of living marine resources in the Wider Caribbean Region. Alexcia was awarded the Emerging Leaders of the Americas Program (ELAP) (DFAIT) scholarship.

Alexcia is capitalizing on this scholarship opportunity by partaking in three courses relevant to her work; Law of the Sea, Research Methods and a targeted reading course aimed at the development of her PhD research proposal. The latter was taken with co-supervisor and director of the Marine Affairs Program, Dr. Lucia Fanning. According to Alexcia "The greatest value from this experience is the concerted approach through the courses taken towards an improved understanding of academic proposal development. The wealth of resources made available, the guidance received and the knowledgeable and helpful staff are appreciated".

MMM 2008-2009 Graduating Class

The third *Making Waves: MMM Graduate Project Presentations* took place on August 25, 2009. Members of the 2009 MMM class presented the results of their graduate project research to alumni, faculty, internship hosts, academic supervisors and members of the incoming MMM class. The following is a list of the titles for the graduate projects. Abstracts for the graduate projects can be found on the MAP website.

Jacklyn Chisholm-Lightbourne: Assessing water quality management issues in sensitive coastal ecosystems within Nova Scotia

Aurelie Cosandy Godin: Strengthening Shark Conservation in Canada - a Management Blueprint

Romero DaRocha: Integrated Coastal and Ocean Management in Nova Scotia: An Analysis of the Intergovernmental Implementing Capabilities

Alex Gagne: Looking for Common Ground: Indigenous Marine Resource Governance and the Pacific Salmon Forum Report

Chelsea Garth: Sea of no cares?: An evaluation of marine security policy in Canada

Olando Harvey: Community-led Integrated Coastal Zone Management: Case Study from the Malpeque Bay, Prince Edward Island

Jessica McFee: Options to reduce North Atlantic right whale (*Eubalaena glacialis*) entanglements by characterizing Scotia-Fundy fisheries

Mark O'Flaherty: Consequences if Individual Transferable Quotas: a Case Study of the Scotia-Fundy Inshore Mobile Gear Fleet

Jacquelyn Rutherford: Shifting Paradigms: An Examination of Self-Determination in Affirming Traditional Coastal Governance in the Mi'kmaq Nation

Suzette Soomai: Information and Influence in Fisheries Management: A Preliminary Study of the Shrimp and Groundfish Resources in the Brazil-Guianas Continental Shelf

Colleen Turlo: Socioeconomic Impact Assessment Framework: Towards more Inclusive Marine Protected Area Planning and Management in Canada

Xu Fang: Framework for Risk Assessment of Ship-Source Oil Spills in Canadian Maritimes

MMM Gold Award



Congratulations to Mark O'Flaherty, MMM Gold Award recipient for the 2008-2009 class. The MMM Gold Award is named in honour of Dr. Edgar Gold, CM, QC, one of the founders of the Dalhousie Oceans Studies Program. The annual financial award is presented to the recipients

identified within the annual peer group according to academic performance and overall ability to reflect the ideal graduate as the "honest broker" (one who is mindful of the complementary and competing multi- and inter-disciplinary interests that influence the design, implementation and outcome of the management process in marine affairs).

MAP Prizes to Students

Due to the receipt of a monetary donation to the Marine Affairs Program in 2008, three prizes were established to recognize MMM student achievement. Two prizes were identified for student performance in the winter term core courses (MARA 5001, Contemporary Issues taught by Professor Richard Apostle and MARA 5003, Marine Science and Technology, taught by Professors Robert Fournier and Chris Taggart). A third prize, the Director's Prize, focuses on the student's overall contribution to the activities of the MAP and to their fellow students, over the course of the entire year.

Alex Gagne was the recipient of both the MARA 5001 and MARA 5003 Prizes while Romero Da Rocha was awarded the Director's Prize. Both students received a certificate and cash prize at the Graduate Project Presentation event held in August. In addition, plaques honouring their achievement are on display in the hallway outside of the MAP main office. Congratulations to Alex and Romero!



Convocation



Congratulations and best wishes to the MMM graduating class of 2009! The convocation ceremony took place on Sunday October 18th. In the photo above are (l-r): Lucia Fanning, MAP Director, Suzuette Soomai, Chelsea Garth, Jacquelyn Rutherford, Aurelie Consandy Godin and Jessie McFee. Romero Da Rocha is kneeling.

MAP Welcomes Assistant Professor Elizabeth De Santo

Elizabeth De Santo, PhD (University College London) joined the MAP family in August. Elizabeth will be teaching and conducting research in the Marine Affairs Program, specifically teaching MARA 5013 Marine Protected Areas in the winter term. Her research areas include political ecology, environmental security, institutional effectiveness, marine governance and improving the science/policy interface in environmental decision-making. She is currently examining marine spatial planning initiatives in Europe and North America, and environmental geopolitics in the Arctic.

Elizabeth has been busy since her arrival, working on the preparation of 3 SSHRC grant proposals, 2 of which are with other faculty members, presenting a seminar at MAP titled “Governing Marine Protected Areas”, guest lecturing in an Environmental Sciences course and a College of Sustainability course and attending 2 conferences.

In mid-October, Elizabeth co-convoked a UNEP-sponsored workshop on “Governing Marine Protected Areas: Getting the Balance Right” held in Mali-Lošinj, Croatia. The workshop involved twenty-five leading experts from five continents and seventeen countries around the world who are engaged in Marine Protected Area (MPA) governance at a practitioner and/or research level. The project is being coordinated by Dr. Peter Jones (UCL), Dr. Elizabeth De Santo (Marine Affairs Programme, Dalhousie University), Wanfei Qiu (UCL) and Ole Vestergaard (UNEP Division for Environmental Policy Implementation, Marine and Coastal Ecosystems Branch). Co-hosted by Blue World Institute, University College London and the United Nations Environment Programme, the workshop systematically compared and analyzed a representative range of MPA case studies from around the world as part of a project to develop a good practice guide. For further information on this project, see: <http://www.homepages.ucl.ac.uk/~ucfwpej/pdf/IUCNBalance.pdf>. She also traveled to London for a follow-up to the workshop in November. The UNEP report, which Elizabeth is co-authoring, is forthcoming in early 2010.

At the Ocean Management Research Network (OMRN) National Conference in Ottawa in late October, Elizabeth gave a presentation on “Reflections on 20 years of the Precautionary Principle in Marine Environmental Management”.

Originally from New York, Elizabeth studied her BA at Connecticut College, Master of Environmental Management at Duke University, and Master of Science in the History of International Relations at the London School of Economics. Her PhD was completed in 2007 at University



College London and the title of her thesis was "Offshore marine conservation in the North East Atlantic: Opportunities and challenges for the developing regime".

Elizabeth will also be engaged in teaching at the College of Sustainability www.sustainability.dal.ca.

If you would like to get in touch with Elizabeth, please do so at Elizabeth.De.Santo@dal.ca, 902-494-7132.

MAP Projects

Coastal Research Network Secretariat

The Government of Nova Scotia's Coastal Management Framework called for the creation of a coastal research network among public, private and academic research institutions to help advance, promote, conduct and disseminate quality research on coastal issues in Nova Scotia and Atlantic Canada in support of coastal management and the provincial Sustainable Coastal Development Strategy. The Government of Nova Scotia established the *Coastal Research Network Secretariat (CRNS)* within the Marine Affairs Program earlier this year to facilitate the creation of the network and eventually coordinate its activities. One of the key activities of the CRNS has been the creation of a database of information related to coastal management in Nova Scotia and Atlantic Canada, including specialists and organizations related to the six priority coastal issues. In the New Year, the CRNS will be organizing a kick-off workshop to formally establish the network which will provide a means for research and academic institutions to directly influence coastal and ocean management in Nova Scotia. Chris Burbidge, MMM 2008, is the coordinator of the CRNS.



Marine Spatial Planning

Marine spatial planning (MSP) is widely seen as an ideal mechanism for managing marine and coastal areas. MSP involves using comprehensive knowledge of natural and human activities in the marine and coastal area, their interactions and a singular long-term vision for the future management to determine the ideal allocation of marine space and time for any given marine activity. There is particular interest in implementing MSP in Atlantic Canada and this research focuses on some of the legal elements surrounding such an implementation.

Three specific elements relating to MSP implementation have been reviewed by this research: (1) a review of the existing Canadian legislation which could be used to implement MSP; (2) the legal and legislative designs of existing MSP regimes in Europe; and (3) the mechanisms for facilitating federal-provincial cooperation for MSP projects in Canada. Three papers on the aforementioned topics have been produced for the Canadian Department of Fisheries and Oceans and they are currently being edited for potential publication.



Don McCrimmon is the Research Assistant working on this project with Lucia Fanning. Don completed his Masters in Law at Dalhousie University in the spring of 2009 and has been working with the Marine Affairs Department since then. He is an avid cyclist and traveler, recently combining both passions bicycling around Cuba. Currently, Don is working on new research on how MSP can be applied in the Canadian context before he returns to the Dalhousie Law School next fall to pursue his PhD in Law.

Conference News

OMRN

The Ocean Management Research Network national Conference was held in Ottawa on October 21-24, 2009. A wide range of presentations were given by ocean management participants from Canada, US and overseas. There was MAP (alumni and faculty) participation in attendance as well as oral and poster presentations.

Marc Allain, MMM 1995, Special Projects Manager, Makivik Corporation - speaker at the "Perspectives on an Oceans Vision" session

Chris Burbidge, MMM 2008, Coastal Research Network Coordinator – conference participant

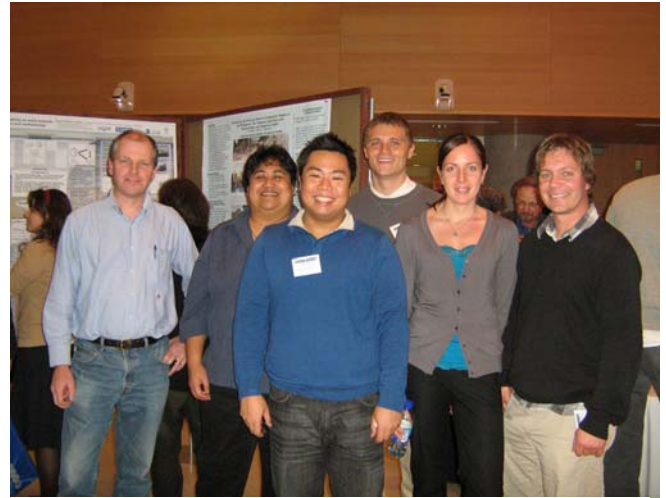
Robert C. Capistrano, MMM 2007 and United Nations - Nippon Foundation of Japan Fellowship Programme Fellow at Saint Mary's University - poster presentation "Reclaiming the Ancestral Waters of Indigenous Peoples in the Philippines: The Tagbanua Experience with Fishing Rights and Indigenous Rights" (pictured below)



Tony Charles, MAP Adjunct Professor – speaker at the "Property Rights in Fisheries: Private versus Public and the Role of Governments 'Whose Ocean is it Anyway'" session, and chair and speaker at the "Coastal Communities Engaged in Coastal Management" session.

Scott Coffen-Smout, DMA 1989, conference participant

Apurba Krishna Deb, MMM 1997, oral presentation "Beyond the Lessons of Biology": Landlocked Hilsa population in the north-eastern wetlands of Bangladesh"



Some of the MMM alumni at the OMRN Conference (l-r): Scott Coffen-Smout, Lisette Wilson, Robert Capistrano, Chris Burbidge, Aimee Gromack and Glen Herbert.

Elizabeth De Santo, MAP Assistant Professor – oral presentation "Reflections on twenty years of the precautionary principle in marine environmental management"

Aimee Gromack, MMM 2008 – oral presentation "Advancing Federal-Provincial collaboration in coastal MPA planning in Nova Scotia"

Glen Herbert, MMM 1994 conference participant

John Kearney, MAP Adjunct Professor – oral presentation "Deepening the social learning process through North-South linkages"

Lucia Fanning, MMM 1997 and MAP Director – oral presentations "Large Marine Ecosystem complexity and governance: where does the Caribbean fit?" and "Towards a Coastal Area Definition for Nova Scotia"

Larry Hildebrand, MAP Adjunct Professor – oral presentation "Emerging initiatives towards coastal management, Canada and the world" and speaker at the "Canada's Ocean Networks: Who speaks for the oceans anyway?" session

Jason Simms, MMM 1998 - speaker at the "DFO Centres of Oceans Expertise: Coastal Management, Corals, Oceans Reporting and Traditional Ecological Knowledge" session

Lisette Wilson, MMM 2007 – oral presentation "Community perspectives on integrated coastal management: Voices from the Annapolis Basin area, Nova Scotia, Canada"

The DFO Oceans Division held a pre-conference session titled "Identification of Social and Cultural Values in Support of Integrated Oceans Management". MAP participants at the session

included Robert C. Capistrano, Tony Charles, Scott Coffen-Smout, Aimee Gromack, Glen Herbert, Larry Hildebrand, John Kearney, Jason Simms and Lisette Wilson.

For more information on the conference and on the OMRN, visit www.omrn-rrgo.uottawa.ca.

Gulf of Maine Maritime Boundary Delimitation: Law, Science and Policy of Marine Transboundary Management

To commemorate the 25th anniversary of the International Court of Justice *Case Concerning Delimitation of the Maritime Boundary in the Gulf of Mains Area* (Canada/United State), a symposium was held at Prout's Neck, Maine on November 13-14, 2009. The symposium was hosted by the Marine Law Institute at the University of Maine and the Marine & Environmental Law Institute at Dalhousie University. Lucia Fanning, MAP Director, gave a presentation titled "Ocean Jurisdiction and Energy: Exploring Bi-National Policy Options for Georges Bank".

A report on the symposium has been prepared by Susan Rolston and will be posted on the OMRN International Ocean Governance Working Group website soon.

MAP Class Field trips ***Joggins Fossil Cliffs***



On October 16, the MMM students in the Management Without Borders class travelled to Joggins Nova Scotia to visit the Joggins Fossil Cliffs UNESCO World Heritage site (<http://jogginsfossilcliffs.net>),. Jenna Boon,

Director of the Joggins Fossil Institute and MMM student, was the host for the visit. Jenna and her staff gave presentations on the process of how the Joggins Fossil Cliffs became a World Heritage site. They also described the key and unique green building technology that was used for the building and surrounding landscape. The visit concluded with a guided tour of the fossil cliffs. From all accounts, Joggins is highly recommended as a place to spend a day.

Bear River First Nation



John Kearney took the students of MARA 5012 Community Based Co-Management class to visit the Bear River First Nation reserve in Bear River, Nova Scotia in late November. During the drive to Bear River, major land marks and historical facts were pointed out as many of the students had not yet traveled to the Annapolis Valley. Upon arrival at the Bear River First Nation band office, the group headed out to the site of one of the stream restoration projects. Robert McKwan, the band's resource manager, explained the principles of stream restorations, the techniques they used, and the improvements they have seen in stream quality and the return of traditional fish species. Sherry Pictou, a former chief and the co-coordinator of the World Forum of Fisher People talked about the struggles of the Bear River First Nation in defending their fishing and traditional use rights. She also talked about many dimensions of community-based co-management that are part of the subject matter of MARA 5012. Sherry had just returned from Rome where she had participated in civil society activities associated with the FAO meetings on food security. After Sherry's talk, the regularly scheduled class of MARA 5012 took place with student presentations. The field trip

concluded with delicious fish chowder prepared by Robert McKwan.

Clark's Harbour and Woods Harbour

The students of MARA 5021, Fisheries Management, toured the coastal fishing communities, Clarks Harbour and Woods Harbour on Sunday November 29th, prior to the opening of the 2009 lobster season in South Western Nova Scotia. A tour of Xsealent Seafoods by the owner, Terry Zinck provided an opportunity to learn, first hand, some of the issues facing fish packers and buyers involved in the groundfish and lobster fisheries.

Lunch with the Nova Scotia Minister of Fisheries and Aquaculture, Hon. Sterling Belliveau, was followed by an impromptu guided tour by the minister of the Woods Harbour, where preparations were well underway for the lobster fishery. Student also had an opportunity to learn more about the emerging hagfish fishery from Kevin Amirault, a lobster fisher from Lower West Pubnico.

The day long tour was a fitting way for students to experience the efforts made by fishers and buyers to prepare for the lobster fishery, to understand the scope of investment made by individual fishers to participate in the fishery, and to appreciate the importance of this industry to the coastal communities of South Western Nova Scotia.



Fisheries Management class with Hon. Sterling Belliveau (2nd from the left)

MAP News

Visitors to MAP

In October, Vice Admiral (R) Mohammad Haroon, Rector of Bahria University in Pakistan and Captain Raja Javed Afzal, Director of the National

Centre for Maritime Policy Research visited Dalhousie University. The purpose of their visit was to continue discussions on the university-to-university level collaboration in developing the marine program at Bahria University's National Centre for Maritime Policy Research. During the visit, they held meetings at MAP, the Centre for Foreign Policy Studies, International Ocean Institute, Schulich Law School, Company of Master Mariners and Cape Breton University. They also met with the Dean of Management, Vice President of Research and the Associate Vice President of Academic Outreach and International Programs. Vice Admiral Haroon also did a seminar presentation titled "Pakistan's Role in Combating Maritime Terrorism and Piracy."



Captain Javed Afzal, Lucia Fanning and Vice Admiral (R) Mohammad Haroon

Larry Hildebrand

Larry Hildebrand, long time MAP Adjunct Professor, successfully defended his PhD thesis on November 13, 2009 at the School of Earth, Ocean and Planetary Sciences, University of Wales. The title of the thesis is "Power Sharing in the Coastal Zone: Shifting Roles of Government in Community-based Coastal Management". Congratulations to Dr. Larry from all your friends at MAP.

Larry Hildebrand with Apurba Krishna Deb, MMM alumni 1997 at the OMRN conference



MAP Fall Seminars

October 7 – Elizabeth De Santo, MAP Assistant Professor – *Governing Marine Protected Areas*

October 14 – Marina Winterbottom, MMM 2007 and Marine Biologist, Stantec - *Environmental Consulting along Canada's Coastlines*

October 28 – Alexcia Cooke, PhD candidate, University of the West Indies and ELAP Visiting Scholar to MAP - *Transboundary Marine and Coastal Management: The Case of the Sustainable Grenadines Project*

November 4 – Vice Admiral (R) Mohammad Haroon, Rector of Bahria University, Pakistan – *Pakistan's Role in Combating Maritime Terrorism and Piracy*

November 18 – Robert Fournier, MAP Adjunct Professor and Professor Emeritus Oceanography – *Using Traditional Knowledge to Create a Coastal Resource Inventory in Nunavut*

Recent Publications

De Santo, E.M., 2009. 'Whose science?' Precaution and power play in European marine environmental decision-making. *Marine Policy* (in press).

Ohowa, Boaz O., 2009. Evaluation of the effectiveness of the regulatory regime in the management of oil pollution in Kenya. *Ocean and Coastal Management* 52: 17-21.

Wilson, L. and Wiber, M., 2009. Community perspectives on integrated coastal management: Voices from the Annapolis Basin area, Nova Scotia, Canada. *Ocean and Coastal Management* 52: 559-567.

Charles, A.T., and Wilson, L., 2009. Human dimensions of Marine Protected Areas. *ICES Journal of Marine Science* 66: 6-15.

Charles, A.T., Burbidge, C., Boyd, H., and Lavers, A., 2009. Fisheries and the Marine Environment in Nova Scotia: Searching for Sustainability and Resilience. GPI Atlantic, Nova Scotia, Canada.

Menafra, R., Conde, D., Roche, I., Gorfinkiel, D., Píriz, C., Baliero, W., Biasco, E., Fossati, M., Lorenzo, E., Cortazzo, R., & Fournier, R., 2009. Challenges and opportunities for integrated coastal management in Uruguay. *Ocean Yearbook* 23: 403-432.

Chupick, M., 2009. Missing the mark: the problem of piracy off the coast of Somalia. *The Maritime Warfare Bulletin*: 15-18.

Siddique, M.A.L., 2009. Conservation of juvenile Hilsa (Jatka) in Bangladesh: Need to address the livelihood of fishers. *American Fisheries Society Symposium* 69: 757-768.

Landry, M.S. & Taggart, C.T., 2009. "Turtle watching" conservation guidelines: Green turtle (*Chelonia mydas*) tourism in nearshore coastal environments. *Biodiversity and Conservation*. In press.

Breen, E. & Metaxas, A., 2009. Effects of juvenile non-indigenous *Carcinus maenas* on the growth and condition of juvenile *Cancer irroratus*. *Journal of Experimental Marine Biology and Ecology* 377: 12-19.

Breen, E. & Metaxas, A., 2008. A comparison of predation rates by non-indigenous and indigenous crabs (juvenile *Carcinus maenas*, juvenile *Cancer irroratus*, and adult *Dyspanopeus sayi*) in laboratory and field experiments. *Estuaries and Coasts* 31: 728-737.

Breen, E and A. Metaxas (in press). Overlap in the distributions between indigenous and non-indigenous decapods in a brackish micro-tidal system. *Aquatic Biology*.

MMM internship recognition

The Master of Marine Management degree has been approved and posted on the Federal Government's Approved CO-OP/Internship Programs website. For more information, see <https://www5.psc-cfp.gc.ca/coop/> or contact Becky Field, Administrator.

In Memoriam

Dipak Kamal, MMM 1999 and Associate Professor of Khulna University of Bangladesh, passed away suddenly on August 4, 2009 at the Asian Institute of Technology, Thailand. Dipak was studying his PhD (MAP Matters December 2008). Our sympathy to the family of Dipak as well as his colleagues at Khulna University.

MAP Matters is the newsletter of the Marine Affairs Program, Faculty of Management, Dalhousie University. Feel free to distribute to your colleagues worldwide.

We welcome your input and contributions. Please send news items along with photos of your current activities to:

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