



**INTERNATIONAL OCEAN INSTITUTE**



**TRAINING PROGRAMME ON  
*OCEAN GOVERNANCE: POLICY, LAW AND MANAGEMENT***

# **2011 COURSE REPORT**



**Dalhousie University, Halifax, Canada  
18<sup>th</sup> May – 15<sup>th</sup> July, 2011**

**INTERNATIONAL OCEAN INSTITUTE**

**2011  
COURSE REPORT**

**IOI-Canada  
Dalhousie University  
6414 Coburg Road  
P.O. Box 15000  
Halifax, Nova Scotia, B3H 4R2, Canada**

**Tel: 1 902 494 1977 • Fax: 1 902 494 1334 • E-mail: [ioi@dal.ca](mailto:ioi@dal.ca) • Web: [www.dal.ca/ioihfx](http://www.dal.ca/ioihfx)**

## TABLE OF CONTENTS

	<b>Page</b>
Introduction	1
Group Photograph	2
International Ocean Institute	3
The Training Programme	4
Syllabus	5
Course Director's Report	18
Participants	23
Funders	25
Lecturers and Field Trip Co-ordinators	41
Staff	49

## INTRODUCTION

This report provides a record of the 2011 training programme on *Ocean Governance: Policy, Law and Management*, conducted by the International Ocean Institute (IOI) at Dalhousie University, Halifax, Canada. Held from 18<sup>th</sup> May to 15<sup>th</sup> July, this was the 31<sup>st</sup> annual course since the training programme was instituted by Elisabeth Mann Borgese, Founder of the IOI.

The programme was attended by 15 participants from a range of disciplines and backgrounds. A good balance of countries and regions was achieved, with participants coming from Africa, Asia, the Caribbean, South America and the South Pacific. As usual, emphasis was placed on having strong female representation among the group, with slightly more women than men in the class this year.



Lectures were delivered by over 90 speakers, and included local and international experts and practitioners. The course was organised thematically as follows:

- Module 1:** Orientation and Introduction to the Training Programme
- Module 2:** Integrated Coastal and Ocean Management
- Module 3:** Ocean Sciences
- Module 4:** Law of the Sea and Principled Ocean Governance
- Module 5:** Fisheries and Aquaculture
- Module 6:** Communication and Negotiation
- Module 7:** Energy
- Module 8:** Maritime Security
- Module 9:** Marine Transportation
- Module 10:** International Round Table  
Conclusion of Training Programme

*Photo credits in report: IOI staff, IOI participants, Kevin Deagle (unless otherwise indicated)*

## GROUP PHOTOGRAPH



*Photo credit: Nick Pearce, Dalhousie University*

**Front row (from left to right):** Madeleine Coffen-Smout, Programme Officer (England), Ruby Napata (Philippines), Zahidah Afrin Nisa (Fiji), Tom Traves, President, Dalhousie University (Canada), Rose Sallema Mtui (Tanzania), Vivian Belisle-Ramnarace (Belize), Susana Perera Valderrama (Cuba), Luo Tingting (China).

**Second row:** Lara Green, 2011 Course Co-ordinator (Canada), Parinda Ranasinghe Jnr (Sri Lanka), Chang Hong (China), João Lizardo (Cape Verde), Yu Ying (China), Yu Xinwei (China), Radjeskumar Asraf (Suriname).

**Back row:** Ian Porter, Lecturer (Canada), Peter Wells, Senior Research Fellow (Canada), Mike Butler, Director & 2011 Course Director (England/Canada), Jennifer Barr, Finance Officer (Canada), Recardo Mieux (Trinidad & Tobago), Pascal Andriamanambina (Madagascar), Iyva Gage (Dominica).

## INTERNATIONAL OCEAN INSTITUTE

IOI-Canada is a leading member of the International Ocean Institute's network of operational centres and focal points operating worldwide in over 25 countries. One of the earliest IOI centres, it was established by Elisabeth Mann Borgese in 1979 soon after she arrived at Dalhousie University in Halifax, Nova Scotia, and it has been based at the university ever since.



Registered as the “IOI-Canada Association”, IOI-Canada is a not-for-profit organisation, federally incorporated under the Canada Corporations Act, and governed by a Board of Directors. It is guided by the IOI/Dalhousie Oceans Advisory Committee and staffed by an experienced team of professionals, augmented by Research Fellows, Visiting Scholars and interns who all contribute to its activities. IOI-Canada is the regional co-ordinator of the IOI Operational Centres in the Americas, which consists of IOI-Brazil, IOI-Costa Rica, IOI-Cuba and IOI-USA, in addition to the Canadian centre. The international headquarters of the IOI have been located in Malta since being founded in 1972 by Elisabeth Mann Borgese. Information on IOI headquarters and the network as a whole can be found at [www.ioinst.org](http://www.ioinst.org).

IOI-Canada's mission is to promote responsible ocean governance and the stewardship and sustainable use of coastal and ocean resources in Canada and around the world. Our goals define what we intend to accomplish in fulfillment of the mission. We aim to encourage and develop the potential and capacity of individuals, institutions and communities to foster:

- a network of individuals dedicated to effective coastal and ocean governance;
- a network of institutions devoted to coastal and ocean governance, management, education, training, research and outreach; and,
- sustainable and prosperous coastal communities.

IOI-Canada accomplishes its mission and goals through three main activities: education and training, collaborative research, and outreach. Interdisciplinary training is its major focus, and through its flagship course, it has trained over 600 individuals from almost 100 countries.

## **THE TRAINING PROGRAMME**

### **Purpose and Approach**

With the support of Dalhousie University, the International Ocean Institute has offered an intensive, interdisciplinary training programme in Halifax annually since 1981. It is one of the courses available through the IOI network's OceanLearn suite of programmes.

The purpose of this training programme is to:

- deepen understanding of the ever-increasing importance of the oceans and their resources in world politics and sustainable economic development;
- assist developing countries in the formation of a core of decision-makers fully aware of the complex issues of coastal and ocean management; and,
- maximise benefits to be derived from the United Nations Convention on the Law of the Sea through the proper integration of coastal and ocean management into national and international development strategies.

The course emphasises the importance of viewing the ocean as a system with varied users and multiple, often competing and conflicting, uses. It also aims to increase awareness of the fact that ocean management requires broad interdisciplinary skills, new institutional and legal infrastructures, and new forms of intergovernmental and non-governmental organisation and cooperation at the local, national and international levels.

The training programme takes place in Halifax on the campus of Dalhousie University, and consists of approximately 200 hours of intensive learning. While it is primarily lecture-based, the course also includes interactive discussions, exercises and simulations, field trips and an international round table.

### **Participants**

The training programme is specifically designed to benefit developing country mid-career professionals who are responsible for some aspect of ocean governance or marine management. Given the under-representation of women in the upper echelons of administration and policy-making worldwide, particular emphasis is placed on trying to achieve equal numbers of female and male participants, and to create a forum where men and women can learn together, sharing different perspectives and examining issues from different viewpoints.

### **Course Content**

The course is a foundational programme in a very important field of development strategy; it is not intended to provide specialised training. Participants are therefore expected to step out of their fields of specialisation and be exposed to broadly interdisciplinary work.

The 2011 training programme was organised into 10 modules and covered a wide range of different themes and issues, as set out in the following syllabus. When provided by lecturers, a brief summary of the topics to be covered in their presentation was posted on the IOI-Canada website, and these can be reviewed at <http://internationaloceaninstitute.dal.ca/2011LectureTopics.doc>.



## SYLLABUS

<p><b>MODULE 1</b> Orientation and Introduction to the Training Programme</p>
---

### Wednesday, 18<sup>th</sup> May

9:30 – 10:00	Introductions & Administrative Matters	Ms Lara Green (Module Leader)
10.15 – 12.00	Killam Library Tour	Ms Michelle Paon
1.30 – 2.45	Introduction to Computing Services	Mr Amir Feridooni
3.00 – 4.00	Walking Tour of Upper Campus	Ms Katherine Hay

### Thursday, 19<sup>th</sup> May

9.00 – 9.45	Ethical Issues in Ocean Governance	Prof. Ian McAllister
10.00 – 12.00	Kaleidoscope: the Intercultural Experience	Mr Jack Potter Ms Soulafa Al-Abbasi
1.30 – 3.30	Managing at University	Dr David Mensink

### Friday, 20<sup>th</sup> May

9.00 – 12.00	Organisation of Course Work, and Introduction to Modules & Module Leaders	Mr Mike Butler Module Leaders IOI staff
1.30 – 2.45	The Sea in Human History	Mr David Griffiths
4.00 – 6.00	Opening Ceremony	Dr Aldo Chircop All

### Saturday, 21<sup>st</sup> May

All day	Free. Optional morning trip to Farmers Market	
---------	---	--





**Friday, 27<sup>th</sup> May**

9.00 – 12.00	Toolbox: Introduction to GIS (venue: Rowe 4001)	Ms Jennifer Strang
1.30 – 4.00	Toolbox: GIS Applications (venue: Rowe 4001)	Mr James Boxall Mr Raymond Jahncke

**Saturday, 28<sup>th</sup> May**

All day Free

**Sunday, 29<sup>th</sup> May**

All day Free

<p><b>MODULE 3</b> Ocean Sciences</p>
---

**Monday, 30<sup>th</sup> May**

9.00 – 9.30	Introduction to Module	Dr Peter Wells (Module Leader)
9.30 – 12.00	Health of the Oceans	Dr Peter Wells
1.30 – 4.00	Introduction to Oceanography	Dr Anna Metaxas

**Tuesday, 31<sup>st</sup> May**

9.00 – 12.00	Land/Sea Interface: Estuarine and Coastal Waters	Dr Graham Daborn
1.30 – 4.00	Science into Policy	Dr Bruce Hatcher

**Wednesday, 1<sup>st</sup> June**

9.00 – 12.00	Ocean Weather and Forecasting	Mr Doug Mercer
1.30 – 4.00	Oil Pollution in the Gulf of Mexico	Dr Peter Wells

**Thursday, 2<sup>nd</sup> June**

9.00 – 12.00	Climate Change	Dr John Shaw
1.30 – 4.00	Remote Sensing and the Oceans	Mr Dirk Werle

**Friday, 3<sup>rd</sup> June**

9.00 – 11.30	Deep Sea Coral Case Study	Dr Martin Willison
11.30 – 12.00	Module Wrap-up	Dr Peter Wells
1.30 – 4.00	Participant Presentations	Participants

**Saturday, 4<sup>th</sup> June**

All day      Free

**Sunday, 5<sup>th</sup> June**

All day      Free

<p style="text-align: center;"><b>MODULE 4</b> Law of the Sea and Principled Ocean Governance</p>
---

**Monday, 6<sup>th</sup> June**

9.00 – 12.00	Introduction to Law of the Sea	Mr Hugh Williamson (Module Leader)
1.30 – 2.45	Introduction to Law of the Sea (cont.)	Mr Hugh Williamson
3.00 – 4.00	Simulation Exercise	Mr David Griffiths

**Tuesday, 7<sup>th</sup> June**

9.00 – 12.00	Precautionary Principle	Mr David Dzidzornu
1.30 – 4.00	Ecosystem Approach and Integration	Dr Lucia Fanning

**Wednesday, 8<sup>th</sup> June (World Oceans Day)**

9.00 – 12.00	Maritime Boundary Delimitation	Prof. Phillip Saunders
1.30 – 4.00	Article 76, UN Convention on the Law of the Sea	Dr Richard Haworth
7.00 onwards	Elisabeth Mann Borgese Ocean “Lecture” – <i>Arts and the Sea: A Celebration</i> – with reception to follow	Mr Paul Kennedy Dr Kathy Mac Ms Donna Morrissey Mr Dusan Kadlec Mr Scott Macmillan Ms Jennyfer Brickenden

**Thursday, 9<sup>th</sup> June**

9.00 – 12.00	Polluter Pays	Mr Kenneth MacInnis
1.30 – 3.30	Social Equity: International Fisheries	Ms Cecilia Engler
3.30 – 4.00	Module Wrap-up	Mr Hugh Williamson

**Friday, 10<sup>th</sup> June**

All day	Field trip: Bedford Institute of Oceanography	Mr Bruce Anderson Mr Kristian Curran Mr Gordon Fader Mr Derek Fenton Mr Michel Goguen Ms Jennifer Hackett Mr Tim Hall Mr Warren Joyce Dr David Mosher Mr Brian Robinson Dr Kent Smedbol Dr Jacob Verhoef Dr Alain Vézina Ms Maxine Westhead
---------	---	--

**Saturday, 11<sup>th</sup> June**

All day	Free	
---------	------	--

### **Sunday, 12<sup>th</sup> June**

All day          Free

<b>MODULE 5</b> Fisheries and Aquaculture
--

### **Monday, 13<sup>th</sup> June**

9.00 – 10.30	Introduction to Module	Dr Tony Charles (Module Leader)
10.45 – 12.00	Overview of Fisheries Management in Canada	Mr Bob O'Boyle
1.30 – 2.45	Fisheries Governance: Issues and Solutions	Dr Tony Charles
3.00 – 4.00	Participant Presentations	Participants

### **Tuesday, 14<sup>th</sup> June**

9.00 – 12.00	Ecosystem-based Fishery Management	Dr Nancy Shackell Dr Tony Charles
1.30 – 2.45	Northwest Atlantic Fisheries Organisation: an RFMO	Dr Vladimir Shibanov
3.00 – 4.00	Fisheries Management in Nigeria and the Gulf of Guinea	Dr Yetunde Agbeja

### **Wednesday, 15<sup>th</sup> June**

9.00 – 12.00	Toolbox: Project Cycle	Prof. Ian McAllister
1.30 – 4.00	International Fisheries	Dr Susanna Fuller
Evening	Oceans Film Festival: First Screening (optional)	Ms Rebecca Jamer

### **Thursday, 16<sup>th</sup> June**

9.00 – 12.00	Aquaculture	Mr David Roberts
1.30 – 3.30	Fish Processing	Mr Geordie MacLachlan
3.30 – 4.00	Module Wrap-up	Dr Tony Charles

### **Friday, 17<sup>th</sup> June**

9.00 – 10.30	Toolbox: Information Management	Mr Paul Boudreau (Module Leader)
10.45 – 12.00	Toolbox: State of the Environment Reporting	Dr Jay Walmsley
1.30 – 4.00	Community-based Management	Mr Chris Milley

### **Saturday, 18<sup>th</sup> June**

All day	Field trip to Bay of Fundy: Sustainable Fish Farming Canada Ltd, Grand Pré Historic Site, Annapolis Tidal Power Station, Annapolis Royal Nature Trail	Mr David Roberts Dr Jeremy Lee Mr Leslie Smith Dr Jon Percy Ms Lara Green
---------	---	---

### **Sunday, 19<sup>th</sup> June**

All day	Field trip (cont.): Innovative Fishery Products, Fort Anne, Port Royal, Bear River First Nations Cultural Centre	Mr Doug Bertram Mr Frank Meuse Jr Ms Shalan Joudry Ms Lara Green
---------	--	---

### **Monday, 20<sup>th</sup> June**

All day	Field trip (cont.): Acadian Seaplants, Bay of Fundy – RS/GIS, Fishing Boat Trip, Cooke Aquaculture	Mr Will Neily Mr Nalan Thirupathi Dr Tim Webster Mr Nathan Crowell Mr Chris Hudson Mr Michael Johnston Mr Todd Mosher Ms Lara Green
---------	--	--

**MODULE 6**  
Communication and Negotiation

**Tuesday, 21<sup>st</sup> June**

9.00 – 12.00	Introduction to Module, and Media	Mr Ian Porter (Module Leader)
1.30 – 4.00	Presentation Skills	Mr Ian Porter Mr Tim Tracey

**Wednesday, 22<sup>nd</sup> June**

9.00 – 12.00	Presentation Skills (cont.)	Mr Ian Porter Mr Tim Tracey
12.00	Group Photograph	All
1.30 – 4.00	Communication	Mr Peter MacLellan
Evening	Oceans Film Festival: Second Screening (optional)	Participants

**Thursday, 23<sup>rd</sup> June**

9.00 – 12.00	Negotiation Theory	Dr Gil Winham
1.30 – 4.00	Preparing for Negotiation	Mr Hugh Williamson Prof. Diana Ginn

**MODULE 7**  
Energy

**Friday, 24<sup>th</sup> June**

9.00 – 10.30	Simulation Exercise	Mr David Griffiths
10.45 – 12.00	Tidal Power: Technical Aspects	Mr John Woods
1.30 – 4.00	Toolbox: Environmental Assessment	Mr Derek McDonald Mr Donald Humphrey



### **Saturday, 25<sup>th</sup> June**

All day          Free

### **Sunday, 26<sup>th</sup> June**

All day          Free

### **Monday, 27<sup>th</sup> June**

9.00 – 12.00	Introduction to Module	Mr Carey Ryan (Module Leader)
1.30 – 2.45	Introduction to Geology	Mr David Brown
3.00 – 4.00	Introduction to Geophysics	Mr Tony LaPierre
Evening	Oceans Film Festival: Third Screening (optional)	Participants

### **Tuesday, 28<sup>th</sup> June**

9.00 – 10.30	Exploration and Risk	Mr Norman Miller
10.45 – 12.00	Regulation and CEEA	Mr Eric Theriault
1.30 – 2.45	Participant Presentations	Participants
3.00 – 4.00	Tidal Power: Environmental Aspects	Mr Joe Kozak

### **Wednesday, 29<sup>th</sup> June**

9.00 – 10.30	Wind Power	Mr Kevin Doucette
10.45 – 12.00	Wind Energy: Community Perspective	Mr Terry Norman
1.30 – 2.45	Solar Power	Dr Peter Allen
3.00 – 4.00	Community Sustainability	Dr Alain Joseph
4.00 – 4.30	Module Wrap-up	Mr Carey Ryan

<b>MODULE 8</b> Maritime Security
--------------------------------------

**Thursday, 30<sup>th</sup> June**

9.00 – 11.15	Simulation Exercise	Mr David Griffiths
11.45 – 1.45	Field Trip: HMCS Sackville including informal Introduction to Concepts of Maritime Security	Mr David Griffiths (Module Leader)
2.00 – 4.00	Field Trip: Port of Halifax	Capt. Deidre French

**Friday, 1<sup>st</sup> July (Canada Day)**

All day      Free

**Saturday, 2<sup>nd</sup> July**

All day      Free

**Sunday, 3<sup>rd</sup> July**

All day      Free

**Monday, 4<sup>th</sup> July**

9.00 – 12.00	Introduction to Integrated Maritime Compliance and Enforcement (IMCE)	Cdr Bob Edwards (ret'd) Mr Glen Herbert Mr Matthew Gillis
1.30 – 4.00	IMCE Exercise	Cdr Bob Edwards (ret'd) Mr Glen Herbert Mr Matthew Gillis

**Tuesday, 5<sup>th</sup> July**

All day	IMCE Exercise (cont.)	Cdr Bob Edwards (ret'd) Mr Glen Herbert Mr Matthew Gillis
---------	-----------------------	---

### **Wednesday, 6<sup>th</sup> July**

9.00 – 12.00	Emergency Management & Coastal Communities	Ms Murielle Provost Dr Ron Pelot Mr David Griffiths
1.30 – 3.30	Emergency Management & Coastal Communities (cont.)	Ms Murielle Provost Mr John Webb Mr David Griffiths
3.30 – 4.00	Module Wrap-up	Mr David Griffiths

<p style="text-align: center;"><b>MODULE 9</b> Marine Transportation</p>
--

### **Thursday, 7<sup>th</sup> July**

9.00 – 12.00	Introduction to Marine Transportation	Mr Dick Hodgson (Module Leader)
1.00 – 1.20	Briefing on Marine Affairs Program (optional)	Ms Becky Field
1.30 – 2.45	Simulation Exercise	Mr David Griffiths
3.00 – 4.00	Study Period	Participants

### **Friday, 8<sup>th</sup> July**

9.00 – 12.00	Economic Dimensions of Shipping	Dr Mary Brooks
1.30 – 4.00	Evolution of Containerisation	Mr Jim Frost

### **Saturday, 9<sup>th</sup> July**

All day	Simulation Exercise: Preparation of Presentations	Participants
---------	---	--------------

### **Sunday, 10<sup>th</sup> July**

All day	Simulation Exercise: Preparation of Presentations	Participants
---------	---	--------------

### **Monday, 11<sup>th</sup> July**

9.00 – 12.00	Role and Record of IMO	Mr Bud Streeter
1.30 – 4.00	Field trip: Eastern Canada Response Corporation	Mr Addison Vickard Ms Lara Green

### **Tuesday, 12<sup>th</sup> July**

9.00 – 12.00	The Human Element in International Shipping	Capt. Angus McDonald
12.00 – 1.30	Lunchtime Address	Dr Awni Behnam
1.30 – 3.30	Safety of Ships	Capt. Alan Knight
3.30 – 4.00	Module Wrap-up	Mr Dick Hodgson

<p style="text-align: center;"><b>MODULE 10</b> International Round Table Conclusion of Training Programme</p>
--

### **Wednesday, 13<sup>th</sup> July**

9.00 – 10.45	Round Table – Panel Presentations and Discussion, Introduction to Simulation & Scenario	Mr Masahiro Akiyama Dr Awni Behnam Dr Dan Lane Dr Robert Rangeley Mr Eiji Sakai Mr David Griffiths Participants
11.00 – 12.30	Round Table – Participant Presentations: National Oceans Policy Frameworks	Mr Masahiro Akiyama Dr Awni Behnam Dr Dan Lane Dr Robert Rangeley Mr Eiji Sakai Participants

1.30 – 4.45	Round Table – Participant Presentations: National Oceans Policy Frameworks (cont.)	Mr Masahiro Akiyama Dr Awni Behnam Dr Dan Lane Dr Robert Rangeley Mr Eiji Sakai Mr Hugh Williamson Participants
-------------	---	---

### **Thursday, 14<sup>th</sup> July**

9.00 – 10.45	Round Table – Working Sessions	Mr Masahiro Akiyama Dr Awni Behnam Dr Dan Lane Dr Robert Rangeley Mr Eiji Sakai Mr Hugh Williamson Participants
11.00 – 12.00	Round Table – Case Study on Japan’s Ocean Policy	Mr Masahiro Akiyama
1.30 – 1.45	Official Opening of the Elisabeth Mann Borgese Archives	Dr Awni Behnam Mr Michael Moosberger Dr Martha Crago
1.45 – 4.15	Round Table – Participant Presentations: Regional Oceans Policy Framework	Mr Masahiro Akiyama Dr Awni Behnam Dr Dan Lane Dr Robert Rangeley Mr Eiji Sakai Mr Hugh Williamson Participants
4.30 – 6.30	Closing Ceremony and Reception	All

### **Friday, 15<sup>th</sup> July**

9.30 – 12.00	Feedback, What Next? and Closing Remarks	Mr Michael Butler Ms Madeleine Coffen-Smout Mr David Griffiths Participants
--------------	--	--

## COURSE DIRECTOR'S REPORT

The lead-up to the 2011 Programme was rather stressful for the IOI-Canada team as Dr Noel Brown, who has directed the course for the past 12 years, was unable to join us at the last moment for personal reasons. Due to this unanticipated development, I undertook the role of Course Director. This responsibility certainly provided a different perspective on the course as a whole and also in terms of its numerous components.

As in previous years, the organization of the Training Programme and the logistics of managing course participants from all over the world was made possible by the extraordinarily efficient and diligent IOI-Canada Secretariat staff, namely Madeleine Coffen-Smout (Programme Officer), Jennifer Barr (Finance Officer) and Lara Green (Course Coordinator). It was a pleasure working with them, this being my sixth year as Director. Lara is now engrossed in her graduate studies in the Faculty of Law.

The Secretariat and the Training Programme have benefited from the skills and enthusiasm of the IOI Senior Research Fellows, namely Drs Ratana Chuenpagdee and Peter Wells, David Griffiths and Hugh Williamson. The former chaired the planning committee for the Elisabeth Mann Borgese Ocean Lecture, while the latter three fulfilled the important role of Module Leaders, together with Lara Green, Alison Evans, Dr Tony Charles, Ian Porter, Carey Ryan, Dick Hodgson, and Paul Boudreau. This concept was introduced about eight years ago to ensure module integrity and standards, lecturer-participant interactivity, and also to facilitate a smooth transition from subject to subject and module to module (of which there were 10 in this year's programme).

All the above personnel were involved in the planning of the 2011 Ocean Governance Training Programme which, on Friday, May 20, was officially launched in Dalhousie University's Great Hall. The welcoming panel consisted of Dr Alain Boutet (Dalhousie University), Andrew Younger (MLA, Province of Nova Scotia), Dr Daniel Lebel (Federal Government) and Jennifer Watts (Halifax Regional Municipality). Dr Aldo Chircop, Director of the Marine & Environmental Law Institute (Dalhousie University), and one of IOI-Canada's first alumni, gave the keynote address. Zahidah Afrin Nisa from Fiji (photograph on right) responded on behalf of the 15 participants.



The sequence of modules was scheduled as in 2010 although the lectures and lecturers varied, depending on the availability of the speakers who, it should be emphasized, provide their time and expertise on a pro bono basis. The generosity of the lecturers, combined with the fact that the Halifax region has the fifth largest concentration of marine personnel in the world, has enabled the offering of the Training Programme for the past 31 years! Lecturers kindly permitted the copying of their PowerPoint 'decks' (other than copyrighted material) so that each of the participants could receive a copy of virtually all the lectures on a memory stick by the end of the course.

The importance of the presentations by the participants – a course prerequisite – was re-emphasized this year and provided an excellent learning experience for all concerned. The need for the Secretariat and alumni to keep in contact was also stressed....funding agencies and IOI-Canada require evidence that the course is meeting expectations with respect to personnel and institutional capacity-building. The IOI-

Canada website ([www.dal.ca/ioihfx](http://www.dal.ca/ioihfx)) is designed to facilitate such communication, and includes a relational database to assist with keeping track of the course alumni.

The field trips this year were particularly successful and appreciated by the participants. The visit to the Bedford Institute of Oceanography on June 10, always a highlight, was once again efficiently organized by Jennifer Hackett of the Department of Fisheries and Oceans. The following week was the three-day field trip to the Bay of Fundy and the "Valley", coordinated by Lara Green. The trip included cultural visits to Grand Pré, Fort Anne and Habitation (Port Royal), and the Bear River First Nation Cultural Centre; visits to Sustainable Fish Farming Canada Ltd, a sophisticated land-based aquaculture facility near Windsor; the Annapolis Tidal Power Station; the Acadian Seaplant facility at Cornwallis; the port of Digby and a trip on a fishing vessel (Fundy Viper, captained by Chris Hudson) to view the Salmonid aquaculture site of Cooke Aquaculture in Digby Gut and the local lobster fishery; and the Innovative Fisheries plant at Belleisle which specializes in the harvesting and depuration of clams. An exhausting but exhilarating trip. The visit to the Greenwood airbase and the Grand Pré Winery had to be excluded this year through lack of time, a perennial problem in the eight-week course. Other equally successful field trips in the latter part of the course included visits to HMCS Sackville and the Port of Halifax as part of the Marine Security module, and, as part of the Marine Transportation module, a visit to the Eastern Canada Response Corporation in Dartmouth, the headquarters of oil spill containment and remediation technology on the east coast.



Oceans Day activities this year were particularly high profile and in fact morphed into an Oceans Month. IOI-Canada collaborated with Dalhousie University's 'Oceans Week' which included a Canada-Germany colloquium, an Ocean Tracking Network workshop, a gala dinner and three public presentations by noted marine scientists. Visitors meeting with IOI staff during Oceans Week included Dr Avan Antia of Kiel University, Dr Alexander Proelss of Trier University, and Dr Wendy Watson-Wright, Assistant Director General and Executive Secretary of UNESCO/IOC. To avoid an excess of scientific presentations within the Week, the annual Elisabeth Mann Borgese Ocean Lecture this year celebrated "Arts and the Sea". This public event, held as usual on World Oceans Day (June 8), was co-ordinated by David Griffiths. Chaired by Paul Kennedy of CBC Ideas fame, it featured a panel of five well known artists who discussed their work and the influence of the sea. These were Dr Kathy Mac (poet), Donna Morrissey (novelist), Dusan Kadlec (painter), Scott Macmillan (composer) and Jennyfer Brickenden (librettist). The evening was judged a great success and was well attended by an unusually diverse audience.

In addition to the EMB lecture, IOI-Canada and partners (Museum of Natural History, Maritime Museum of the Atlantic, Ecology Action Centre, CoastalCura, and Dalhousie University's Marine Affairs



Program) presented the Second Annual Oceans Film Festival over four evenings. As last year, it was made possible by the energy and organizational skills of an IOI-Canada intern, in this case Rebecca Jamer, who is now undertaking field work in Rwanda for her Masters Degree. The annual Oceans Day activities on the Halifax waterfront, organized by the provincial Departments of Fisheries and DFO, included numerous exhibits and displays, including one from IOI-Canada manned by another IOI-Canada intern, Dan Mombourquette.

The importance of the Host Families cannot be overstressed. They have become an integral part of the Training Programme and provide an all important second home to the participants, many of whom are homesick at one time or another. The participants look forward to the weekends when they can enjoy Nova Scotia hospitality and are exposed to some of the cultural attributes of this part of Canada. We owe the Host Families a great vote of thanks, and I know from numerous communications that the participants have expressed their gratitude and, in fact, many of them maintain contact with their hosts long after their departure from Canada. One of the events which highlights the Host Family-Participant bond is the Potluck Supper held on a weekend in the latter part of the course. The participants prepare national dishes which are appreciated by all lucky enough to attend. On the subject of food, the midday meals throughout the course are offered at the University Club and I would like to thank Garth McIsaac for his kindness (since the inception of the course in 1981!). He recently retired from his position as Manager of the University Club.



The official Opening of the Elisabeth Mann Borgese Archives, located at Dalhousie's Killam Library, on July 14 was incorporated into the concluding International Round Table (photograph below). In the presence of the panellists and the course participants, the EMB Archives were officially opened by Dalhousie's Archivist, Michael Moosberger, Vice-President of Research, Dr Martha Crago, and IOI



President, Dr Awni Behnam. At a lunch at the University Club, prior to the Round Table, Dr Behnam made a presentation to the course participants on his vision of IOI's future, which very much focussed on training and capacity building.

The International Round Table in the last week of the course is a key component of the Training Programme. Grouped in three fictitious country teams, the participants present their respective 'national' ocean management plans and the 'regional' plan, the contents of which are based on the experience of the simulation exercise, the course lectures, and individual research. David Griffiths has been responsible for developing this sophisticated simulation model, and ably guided the participants through the course-long exercise. This year's International Panel consisted of Masahiro Akiyama (Chairman, OPRF), Dr Dan Lane (Chair, OMRN, and Professor, University of Ottawa), Dr Awni Behnam (President of IOI), Dr Bob Rangeley (Vice-President, WWF-Atlantic Region), and Hugh Williamson (Senior Research Fellow, IOI-

Canada). Eiji Sakai (OPRF and IOI-Canada alumnus) assisted the proceedings. The panellists provided brief overviews of their responsibilities and affiliations. Mr Akiyama also presented on Japan's new Ocean Act. Following the presentations by the course participants (see photograph on right), the panellists provided critiques of the presentations and then mentored the three teams in subsequent discussions. At



the end of the final afternoon, the Closing Ceremonies took place in the Great Hall. Each of the course participants was presented with an official certificate, signifying successful completion of the Training Programme. The participants were then welcomed into the fraternity of the IOI Alumni Association by Suzette Soomai, a graduate of the 2006 course from Trinidad and Tobago. Mr Parinda Ranasinghe, from Sri Lanka, responded with eloquence and humour on behalf of the course participants. A reception concluded an excellent evening.

None of the above would have been possible without the support of the funding agencies all of which are listed elsewhere in this Course Report. Of particular note this year are the scholarships funded by the Ocean Science Research Foundation, the Lloyd's Register Education Trust and the State Oceanic Administration of China. The funders, both big and small, make it possible for the course participants to attend the Training Programme with minimum cost, if any, to themselves or their host institutions. The securement of scholarship funds is a key goal and responsibility of the IOI-Canada Secretariat and its Board of Directors. The Directors have provided much appreciated guidance since the incorporation of IOI-Canada as a not-for-profit NGO in 2010. We are now seeking charitable status in furtherance of IOI-Canada's goals.

Based on the weekly course critiques submitted by the course participants, supplemented by the extended

debriefing session at the end of the course, analyzed by the Course Coordinator, and reviewed by the IOI Secretariat, a number of adjustments will be considered for the 2012 Programme. These include:

- the addition of a lecture on Canadian civics, politics and geography;
- the presentation of a longer ethics lecture and the integration of this subject elsewhere in the Programme;
- further effort to integrate the subject-specific simulation exercises with the major course-length simulation which underpins the preparation of the national and regional ocean management plans;
- increased emphasis on the regional plan which suffered from a lack of allocated time this year;
- scheduling the Maritime Security Module earlier in the course to allow some of its content to be integrated more easily in the national and regional ocean management plans;
- an overview of the UN agencies and International Funding Institutions; and,
- a half day of rest following the exhausting three-day weekend spent on the Bay of Fundy field trip.

There will also be other adjustments including allocated time and topic selection. The need for enhanced interaction between the lecturer and participants and within the participant group itself was once again emphasized, including the need to provide the participants with greater opportunities to follow-up with the lecturers at later dates. Lecturers will also be encouraged to add non-Canadian case studies to their presentations.

Final thoughts: we must continue our efforts to encourage the participation of Canada's First Nations and Inuit in future courses. For logistical reasons we have had limited success to date. Realizing the full potential of the Alumni Association, which in the context of Canada numbers over 600 individuals from almost 100 countries, must be a priority for the IOI Network.

It has been a very successful Training Programme, thanks to the endeavours of the IOI-Canada Secretariat, Senior Research Fellows, interns, Board of Directors, IOI/Dalhousie Ocean Advisory Committee, host families, 100+ speakers and, of course, our host university, Dalhousie! Indeed, thank you!

Michael J.A. Butler  
Director, IOI-Canada



## **PARTICIPANTS**

### **Belize**

Ms Vivian Belisle-Ramnarace, Fisheries Officer - Resource Mobilisation, and EIA Officer, Fisheries Department, Ministry of Agriculture and Fisheries, Belize City

### **Cape Verde**

Mr João Lizardo, Assistant Professor, Engineering and Nautical Sciences Department, Cape Verde University, Ribeira de Julião, São Vicente

### **China**

Ms Chang Hong, Doctoral Student in International Law, Walther-Schücking Institute of International Law, Christian-Albrechts University of Kiel, Kiel

Ms Luo Tingting, Assistant Researcher, National Marine Data and Information Service, State Oceanic Administration, Hedong District, Tianjin

Ms Yu Xinwei, Programme Officer, International Cooperation Department, State Oceanic Administration, Beijing

Ms Yu Ying, Department Officer, Administrative Office, State Oceanic Administration, Beijing

### **Cuba**

Ms Susana Perera Valderrama, Protected Areas Specialist, National Centre for Protected Areas of Cuba, Playa, Ciudad Habana

### **Dominica**

Dr Iyva Gage, Fisheries Officer, Fisheries Division, Roseau

### **Fiji**

Ms Zaidy Afrin Nisa, Technical Regional Programme Coordinator, Foundation of the Peoples of the South Pacific International, Suva

### **Madagascar**

Mr H. Pascal Andriamanambina, Project Manager, Association de Techniciens Environnementalistes, Fort Dauphin

### **Philippines**

Ms Ruby Napata, University Research Associate, Institute of Fisheries Policy and Development Studies, University of the Philippines Visayas, Miagao, Iloilo

### **Sri Lanka**

Mr K.A. Parinda Ranasinghe (Jnr), Senior State Counsel, Attorney General's Department, Hulftsdorp, Colombo

**Suriname**

Mr Radjeskumar Asraf, Policy Officer, Fisheries Department, Ministry of Animal Husbandry and Fisheries, Paramaribo

**Tanzania**

Ms Rose Sallema Mtui, Senior Environmental Management Officer, National Environment Management Council, Mikocheni, Dar Es Salaam

**Trinidad and Tobago**

Mr Recardo Mieux, Fisheries Officer, Fisheries Division, Ministry of Food Production, Land and Marine Affairs, Newtown, Port of Spain

## FUNDERS

The International Ocean Institute wishes to acknowledge the very generous support for the 2011 training programme, which it received from a number of sources. Dalhousie University continues to provide significant in-kind support for the programme. Major scholarship funding for the course was made available by The Lloyd's Register Educational Trust, as well as the Stiftung für Meereswissenschaft und -forschung (Ocean Science and Research Foundation) through both its IOI Women/Youth and the Sea Programme and the Danielle de St Jorre Scholarship. Acknowledgement is also gratefully given to the following organisations for their contributions towards individual participant expenses: Caribbean Regional Fisheries Mechanism; Cluster of Excellence "The Future Ocean" at Christan-Albrechts University of Kiel; Conservation International Samoa; Government of Sri Lanka (Attorney General's Department); National Centre for Protected Areas of Cuba; Protected Areas Conservation Trust; State Oceanic Administration of China; University of the Philippines Visayas; Western Indian Ocean Marine Science Association; and World Wildlife Fund - US through its Russell E. Train *Education for Nature Programme*. The Ocean Management Research Network is also acknowledged for generously supporting the 2011 Elisabeth Mann Borgese Ocean Lecture. A brief profile of each of these organisations, listed alphabetically, is provided in the following pages.

Finally, sincere thanks are due to the various organisations which contributed to the 2011 programme by hosting the class and/or assisting with field trips or the Oceans Film Festival. These included Acadian Seaplants, Annapolis Tidal Generating Station, Bear River First Nation (through Stone Bear Tracks and Trails), Bedford Institute of Oceanography/Department of Fisheries and Oceans, CoastalCura, Cooke Aquaculture (Digby), Dalhousie University's Marine Affairs Program, Eastern Canada Response Corporation, Ecology Action Centre, Innovative Fishery Products, HMCS Sackville, Maritime Museum of the Atlantic, Museum of Natural History, Port of Halifax, and Sustainable Fish Farming Canada Ltd.



**Caribbean Regional Fisheries Mechanism (CRFM)**

Princess Margaret Drive  
P.O. Box 642  
Belize City  
Belize

Tel: 501 223 4443  
Fax: 501 223 4446  
E-mail: [crfm@btl.net](mailto:crfm@btl.net)  
Web: [www.caricom-fisheries.com](http://www.caricom-fisheries.com)

Inaugurated in 2003 and headquartered in Belize, the Caribbean Regional Fisheries Mechanism (CRFM) is an intergovernmental organisation with a mission to “promote and facilitate the responsible utilization of the region's fisheries and other aquatic resources for the economic and social benefits of the current and future population of the region.” Its members are Anguilla, Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, Suriname, Trinidad and Tobago, and Turks and Caicos Islands.

The CRFM consists of three bodies – the Ministerial Council, the Caribbean Fisheries Forum, and the CRFM Secretariat. The Ministerial Council is the highest decision-making body of the CRFM, and is responsible for formulating the policy of the Mechanism. It is comprised of the Ministers responsible for Fisheries in each Member State. The Forum is made up of one representative from each Member, each Associate Member and each Observer. The CRFM Secretariat is the technical unit, located in offices in Belize and the eastern Caribbean (St Vincent and the Grenadines), comprising a permanent body of technical, scientific and support staff.

Under a Memorandum of Understanding with IOI, the CRFM provides funding to cover the airfares of participants from its member countries. This year's travel grants went to government fisheries staff from Belize, Dominica, Suriname, and Trinidad and Tobago.



**Cluster of Excellence “The Future Ocean”**

Christian-Albrechts University of Kiel  
Christian-Albrechts Platz 4  
24118 Kiel  
Germany

Tel: 49 431 880 1559  
E-mail: [info@ozean-der-zukunft.de](mailto:info@ozean-der-zukunft.de)  
Web: [www.futureocean.org](http://www.futureocean.org)

The Kiel Cluster of Excellence “The Future Ocean” is a unique research group in Germany. Its aim is to increase our understanding of ocean change and its associated potentials and risks in order to enter into a new symbiotic relationship between humans and the sea.

“The Future Ocean” is made up of more than 250 scientists from six faculties of the Christian-Albrechts-University of Kiel (CAU), the Leibniz Institute of Marine Sciences (IFM-GEOMAR), the Institute for World Economy (IfW) and the Muthesius University of Fine Arts. The target of these interdisciplinary groups – comprising marine scientists, earth scientists and economists, as well as medical scientists, mathematicians, lawyers and sociologists – is to jointly investigate climate and ocean change, to re-evaluate the opportunities and risks of global change for the oceans, and to develop a sustainable system of resource management for the world’s oceans and marine resources.

The Cluster of Excellence “The Future Ocean” will establish marine sciences as a main field of research at Kiel University. It is supported within the framework of the “excellence initiative” of the German Research Foundation on behalf of the German government and the federal states of Germany.

A doctoral candidate from “The Future Ocean” Cluster, doing an interdisciplinary thesis at the Walther-Schücking Institute of International Law at Kiel University, was enabled to participate in the course.

**Conservation International, Samoa**

P.O. Box 2035  
Apia  
Samoa

Tel: 685 21593  
Web: [www.conservation.org](http://www.conservation.org)

Founded in 1987, Conservation International (CI) is a non-profit organisation headquartered in the USA. With over 900 employees and offices in 31 countries, it works with thousands of partners in 40 more on a wide range of projects. For over 20 years, it has empowered communities in jungles and deserts to make conservation part of their livelihoods. From early partnerships with Patagonia and Starbucks to a ground-breaking relationship with Wal-Mart, CI worked with companies large and small to make conservation part of their business model. Governments from Costa Rica to China have worked with the organisation to make conservation a core component of their national policies.

CI's recently reformulated mission builds on a strong foundation of science, partnership and field demonstration to empower societies to care for nature responsibly and sustainably, for the well-being of humanity. In order to have the most impact as quickly and effectively as possible, CI is focusing both its marine and land-based efforts on six global initiatives, namely:

- working to secure a stable global climate
- understanding and protecting the sources and flows of fresh water
- ensuring nature's ability to provide food for human needs
- minimizing environmental pressures on human health
- valuing the role of nature in human cultures
- safeguarding the unknown and as-yet-undiscovered option values that nature provides.

In pursuit of this, CI's scientists, field staff and policy experts are: measuring the contribution of healthy ecosystems to human well-being; assessing the implications of development decisions; putting cutting-edge, rigorously tested information in the hands of decision-makers and the public; and demonstrating through field models how economic opportunity and the stewardship of natural resources can leverage change on an international scale.

Conservation International's Pacific Island programme supported the participant from Fiji as an intern under CI's Pacific Oceanscape, a Pacific Forum Leader's endorsed initiative. With her research focused on an analysis of Pacific Island commitments and decisions on matters pertaining to the high seas, CI was able to contribute to the participant's travel costs.

**Dalhousie University**

1459 Oxford Street  
P.O. Box 15000  
Halifax, Nova Scotia, B3H 4R2  
Canada

Tel: 1 902 494 2211  
Fax: 1 902 494 2319  
Web: [www.dal.ca](http://www.dal.ca)

Founded by the ninth Earl of Dalhousie in 1818, Dalhousie University has grown from being the little “college by the sea” into one of Canada’s leading research and teaching universities. Spread over nearly 80 acres, it currently offers 3,700 courses in 180 undergraduate, graduate and professional degree programmes, as well as an extensive continuing education programme. Due to the university’s proximity to the ocean, one of Dalhousie’s two areas of special emphasis is Ocean Studies, with the other being Health Studies.

The university has approximately 16,700 full and part-time students. These come from across Canada and from more than 100 countries around the globe, and enjoy one of the lowest student-professor ratios in the country. Dalhousie’s graduates form a powerful network making important contributions in all walks of life, and include the first female Supreme Court of Canada judge, the first American woman to walk in space, and 86 Rhodes Scholars.

Dalhousie’s teaching and research strengths go hand in hand, with a strong core of talented and dedicated researchers conducting basic and applied research. As Atlantic Canada’s leading research university, Dalhousie attracts more than \$132 million in research grants and awards each year. Many of its researchers are nationally and internationally recognised for their work, and the university is home to 52 Canada Research Chairs – more than any other university in the region. Chairholders advance the frontiers of knowledge in their fields, not only through their own work, but also by teaching and supervising students and co-ordinating the work of other researchers.

Each year since the inception of the course in 1981, Dalhousie University has provided crucial in-kind support to the IOI training programme. With the ocean at its doorstep, and with ready access to one of the highest concentrations of marine experts in the world, the university is an ideal host for a course of this kind.

**Government of Sri Lanka**

Attorney General's Department  
Hulftsdorp  
Colombo 12  
Sri Lanka

Tel: 94 11 232 7919  
Fax: 94 11 243 6421  
Web: [www.attorneygeneral.gov.lk](http://www.attorneygeneral.gov.lk)

Sri Lanka's Attorney General's Department is a non-ministerial government department which supports the Attorney General and his/her deputy, the Solicitor General. It handles public prosecution and advises the government on legal matters. The department is headed by the Attorney General and comes under the purview of the Ministry of Justice.

In the performance of its work, the Department operates in five distinct branches. These are the civil branch, the criminal branch, the State Attorney's branch, the Supreme Court branch, and the Corporation branch. There are also special units to which specially identified responsibilities have been assigned.

The major functions of the Department are:

- institution and defence of civil actions for and on behalf of the Republic, Ministers and Public Officers;
- institution and conduct of criminal proceedings for and on behalf of the Republic;
- examination of Bills for their consistency with the provisions of the Constitution;
- providing on request, legal advice or opinions to State institutions;
- appearance before the Supreme Court in proceedings in the Supreme Court in its exercise of jurisdiction in relation to constitutional, fundamental rights, consultative and breach of parliamentary privilege matters; and,
- appearance in court and assisting court in respect of disciplinary proceedings against members of the Bar.

The Attorney General's Department provided the airfare for one of its Senior State Counsels to attend the training programme.

**The Lloyd's Register Educational Trust**

71 Fenchurch Street  
London  
EC3M 4BS  
England

Tel: 44 (0)20 7709 9166  
Fax: 44 (0)20 7423 2045  
E-mail: [lret@lr.org](mailto:lret@lr.org)  
Web: [www.lr.org/LRET](http://www.lr.org/LRET)

The Lloyd's Register Educational Trust (The LRET) is an independent charity, established in 2004 and based in London. Its principal purpose is to support advances in transportation, science, engineering and technology education, training and research worldwide for the benefit of all. It also funds work that enhances the safety of life and property at sea, on land and in the air.

The LRET focuses on four areas:

- **pre-university education:** promotes careers in science, engineering and technology to young people, their parents and teachers, through appropriate organisations;
- **university education:** provides funding to universities for undergraduate and MSc scholarships;
- **vocational training and professional development:** supports professional institutions, educational and training establishments working with people of all ages; and,
- **research:** funds existing or new centres of excellence at institutes and universities.

In the area of 'vocational training,' The LRET provided funding to IOI to enable participants from Cape Verde, Dominica, Madagascar, Sri Lanka, Suriname, and Trinidad & Tobago to take part in the 2011 training programme.

**National Centre for Protected Areas of Cuba**

Calle 18A, No. 4114, e/41 y 47  
Playa  
Ciudad Habana  
Cuba

Tel: 53 7 202 7970  
Fax: 53 7 202 7970  
E-mail: [cnap@snap.cu](mailto:cnap@snap.cu)  
Web: [www.snap.cu/html/cnap.htm](http://www.snap.cu/html/cnap.htm)

The National Centre for Protected Areas (CNAP) of Cuba is a multidisciplinary institution under the Ministry of Science, Technology and Environment. Supported by a co-ordinating body composed of more than 10 government agencies, it is in charge of directing and controlling activities related to the Sistema de Áreas Protegidas/National System of Protected Areas (SNAP). It is also responsible for SNAP's technical and methodological direction, and for assuring compliance with the specific objectives for which the areas were declared protected.

Since its inception in the 1990s, the centre has accumulated extensive experience in managing biodiversity conservation. Key activities have included identifying areas in need of protection, certifying management plans, advocating legislation required for SNAP, promoting international collaboration in the development of conservation projects, and implementation of several projects with international support. Protected Areas now encompass approximately 22% of the national territory and include 253 sites, 108 of which are marine and coastal. The centre is currently leading an important initiative to expand the network of marine protected areas along Cuba's southern coast with funding from the Global Environmental Facility.

Financial support was provided to a CNAP staff member as a contribution towards the cost of her participation in the course.

**Ocean Management Research Network - Réseau de recherche sur la gestion des océans (OMRN-RRGO)**

OMRN Network Secretariat  
c/o Telfer School of Management  
University of Ottawa  
55 Laurier Avenue East  
Ottawa, Ontario, K1N 6N5  
Canada

Tel: 1 613 562 5800 (ext. 2933)  
Fax: 1 613 562 5164  
E-mail: [omrn-rrgo@telfer.uottawa.ca](mailto:omrn-rrgo@telfer.uottawa.ca)  
Web: [www.omrn-rrgo.ca](http://www.omrn-rrgo.ca)

The Ocean Management Research Network (OMRN) is an independent, not-for-profit national network with its secretariat located at the Telfer School of Management of the University of Ottawa. Its aim is to create and share knowledge for the application of critical thinking and best practices in oceans management in Canada. Interdisciplinary, with a focus on the human dimension of oceans policy and social science, the OMRN provides a forum for over 800 members including researchers, managers, and policymakers to evaluate timely and innovative linkages, integrate lessons learned, transfer and share knowledge, and help create an expert core of ocean researchers. It facilitates value-added research, provides seed funding, and seeks to establish a long-term research agenda. The OMRN has been funded periodically since 2001 as a Joint Initiative by the Social Sciences and Humanities Research Council (SSHRC) and Fisheries and Oceans Canada.

OMRN focuses its activities in three major areas:

**A strong research platform** provides an integrated perspective of the humanities and social sciences with links to the natural sciences, health sciences and other ocean-related disciplines.

**Knowledge mobilization and transfer**, defined by the Social Sciences and Humanities Research Council (SSHRC) as “moving knowledge into active service for the broadest possible common good,” is fundamental to the OMRN. OMRN’s outreach and dissemination activities consolidate, synthesise, and disseminate in order to transform knowledge, as well as findings from specific research, while drawing on the experience of its vast network of researchers and stakeholders. In this regard, OMRN provides an integrated perspective to a vast array of political, social, cultural, economic, legal and related ocean management issues.

**Partnerships** are vital to OMRN’s networking and engagement activities. The OMRN works with over 50 partners across Canada including a network of Canadian universities, the Department of Fisheries and Oceans, Parks Canada, Environment Canada, Industry Canada, industry associations, regional organisations, First Nations and NGOs. These partnerships are enhanced, strengthened and evolved through network-wide initiatives as well as thematic Working Groups which emphasise regular collaboration with current partners and potential collaborators, at regional, national and international levels.

The OMRN provided funding for the 2011 Elisabeth Mann Borgese Ocean Lecture, which this year took the form of an evening of multimedia panel presentations and discussion celebrating *Arts and the Sea*. Chaired by CBC’s Paul Kennedy, the panel consisted of Donna Morrissey (author), Dusan Kadlec (painter), Kathy Mac (poet), Scott Macmillan (composer), and Jennyfer Brickenden (Librettist). This World Oceans Day event was part of the 2011 training programme curriculum, and was also a Dalhousie Oceans Week activity.



**Protected Areas Conservation Trust**

3 Mango Street  
P.O. Box 443  
Belmopan  
Cayo District  
Belize

Tel: 501 822 3637  
Fax: 501 822 3759  
E-mail: [info@pactbelize.org](mailto:info@pactbelize.org)  
Web: [www.pactbelize.org](http://www.pactbelize.org)

The Protected Areas Conservation Trust (PACT) is a strategic partner in the funding, management, and sustainable development of Belize's natural and cultural resources for the benefit of Belizeans and the global community. Its mission is to contribute to the sustainable management and development of Belize's natural and cultural heritage by providing effective funding support to protected areas.

PACT was established in 1996 out of the need for a co-ordinating force which could help in the nationwide effort to maximize the conservation, preservation, enhancement and management of Belize's natural and cultural resources. Its priorities were to address terrestrial and marine natural and cultural resources, including protected areas, ecotourism development, improvements at archaeological sites, and community participation. These priorities reflected the policies of the Ministries of Natural Resources and the Environment, Agriculture, Fisheries and Cooperative, and Tourism. Starting with initial support of BZ \$72,000 from USAID, it has grown to a BZ \$5 million fund today.

Through PACT's grants programme, funds are awarded for protected areas management and conservation, protected areas promotion and development, environmental education and awareness, and community development around protected areas. Currently PACT offers Small, Large and Capacity Building Grants. Recipients of Trust monies include registered management organisations of protected areas, non-governmental organisations (NGOs), community based organisations (CBOs), and government agencies involved in the conservation and management, for sustainable use, of Belize's natural resources.

A Capacity Building Grant was awarded to the participant from Belize, as a contribution to her course expenses.

**State Oceanic Administration (SOA)**

1 Fuxingmenwai Avenue  
Beijing  
100860  
P.R. China

Tel: 86 10 6804 8072  
Fax: 86 10 6804 8051  
Web: [www.soa.gov.cn](http://www.soa.gov.cn)

The State Oceanic Administration (SOA) is the government administrative agency in China responsible for:

- the supervision and management of sea area use, marine environment protection, marine disaster forecasting and mitigation;
- ensuring China's marine sovereignty and rights; and
- promoting research in marine science and technology.

Its main functions include:

- comprehensive coordination of marine environmental monitoring, scientific research, waste disposal and ocean resources exploitation;
- formulation of national marine strategy and policies; planning and supervising the implementation of medium and long term National Development Plans for marine issues and a National Development Plan for the marine economy;
- establishing and improving systems concerning marine management, and drafting marine laws and regulations concerning the coastal zone, islands and sea areas;
- supervision, evaluation and information dissemination on marine economic performance;
- regulating, supervising and managing sea area uses;
- island ecological protection and legitimate use of uninhabited islands;
- protection of the marine environment;
- implementing marine research and surveys, promoting marine scientific and technological innovations, undertaking research into – and application and management of – seawater use and marine renewable energy resources, and managing the marine series satellites and ground application system;
- marine environmental observation and forecasting, and marine disaster warning;
- international cooperation and exchange activities;
- safeguarding national maritime rights and interests according to international and domestic laws.

As a result of the efforts made over the past 47 years, SOA has developed a well-structured administrative management system and a competent workforce responsive to the ever-changing situation and able to meet the demands for fulfilling its mandate. Within SOA's framework, there are eight departments in its Beijing-based headquarters, three branches, seven national-level operational centres, five oceanography institutes and two offices responsible for polar affairs and international sea bed mineral resources research and exploration affairs respectively.

SOA provided funding to enable three of its staff members to attend the 2011 course.



**Stiftung für Meereswissenschaft und -forschung (Ocean Science and Research Foundation)**

c/o TREUCO AG  
Claridenstrasse 25  
Postfach 1272  
CH-8027, Zürich  
Switzerland

Tel: 41 44 289 25 25  
Fax: 41 44 289 25 50

The Ocean Science and Research Foundation (OSRF) is a charitable foundation registered in Switzerland. Its general objective is to promote research in the social and natural sciences pertaining to the oceans by granting financial contributions to appropriate research and training projects. Support for the 2011 training programme included funds through both the IOI Women/Youth and the Sea Programme and the Danielle de St Jorre scholarship.

***IOI Women/Youth and the Sea Programme***

The IOI Women and the Sea Programme (subsequently expanded to the IOI Women/Youth and the Sea Programme) was established in 2000 to enhance the capacity and participation of women in poor developing countries in ocean and coastal affairs. The programme has involved several of the IOI Operational Centres, with activities including: training of women decision-makers (IOI-Canada); improving quality of life for women in poverty-stricken coastal communities (IOI-Costa Rica, IOI-India, IOI-Southern Africa, IOI-Senegal); development of seaweed mariculture and local fish processing (IOI-Eastern Africa, IOI-Southern Africa, IOI-Senegal); youth education on marine awareness (Operational Centres in the Black Sea/Caspian region); empowerment of women on aspects of marine ecology, conservation and fisheries (IOI-Nigeria, IOI-Senegal); education for sustainable management, conservation and development of marine resources, in cooperation with the Women and Fisheries Network (IOI-Pacific Islands); training on marine-related handicrafts for coastal women (IOI-Iran); and an outreach education programme on the oceans for women and youth (IOI-Malta). For the 2011 IOI-Canada course, this programme provided partial scholarships for female participants from Belize, China, Cuba, the Philippines and Tanzania, as well as top-up funding for the Danielle de St Jorre scholar (see below).

***Danielle de St Jorre Scholarship***

The Danielle de St Jorre Scholarship was established by the IOI in 1999 to honour the memory of the late Danielle de St Jorre, Minister for Foreign Affairs, the Environment and Tourism of the Republic of the Seychelles, and a member of the Governing Board of the IOI, in consideration of all she did in her short life for the benefit of her country, the small island developing states (SIDS), and the world at large. This scholarship of Swiss Francs 10,000 annually is for women from SIDS to attend training programmes or university degree programmes in ocean affairs. Candidates are selected in consultation with the Alliance of Small Island States (AOSIS), and the scholarship is administered by the IOI Headquarters. The 2011 recipient, an environmentalist from Fiji, chose to use the scholarship to enable her to participate in the Halifax training programme.

**University of the Philippines Visayas**

UPV Campus

Miagao

Iloilo 5023

Philippines

Tel/Fax: 63 (0)33 315 9378

E-mail: upvoc09@gmail.com

Web: www.upv.edu.ph

The University of the Philippines Visayas (UPV) is one of the seven constituent universities of the UP System. Its mission is to:

- provide quality education, especially in the fisheries and aquatic sciences;
- inculcate values and nurture the Visayan cultural heritage; and,
- lead in an advocacy role in the sustainable development of the Visayas Region and of the nation within the changing world order.

Originally, UPV consisted of only two colleges – the College of Fisheries and the College of Arts and Sciences. Today, it has four colleges and a school in three campuses – Miagao, Iloilo City, and Tacloban City – with the main one being the sprawling 1,200 hectare site in Miagao. The strategic location of these three campuses in two regions helps make excellent education, significant research and relevant extension accessible in these parts of the Philippines.

As UPV's flagship college, the College of Fisheries and Ocean Sciences (CFOS) is the recognised leader in fisheries and marine science education in the Philippines, and was named the Centre of Excellence in Fisheries Education in 1998. Programmes to meet the needs of the fisheries sector are provided by its four institutes: Aquaculture; Fisheries Policy and Development Studies; Fish Processing Technology; and Marine Fisheries and Oceanology.

A CFOS University Research Associate at the Institute of Fisheries Policy and Development Studies was assisted by a travel grant from UPV's Academic Personnel and Fellowship Committee. These funds covered her domestic airfare.

**Western Indian Ocean Marine Science Association**

Mizingani Street, House No. 13644/10  
P. O. Box 3298  
Zanzibar  
Tanzania

Tel: 255 24 223 3472/4597  
Fax: 255 24 223 3852  
E-mail: secretary@wiomsa.org  
Web: www.wiomsa.net

Western Indian Ocean Marine Science Association (WIOMSA) is a regional professional, non-governmental, non-profit, membership organisation, registered in Zanzibar, Tanzania. It is dedicated to promoting the educational, scientific and technological development of all aspects of marine sciences throughout the region of Western Indian Ocean – Somalia, Kenya, Tanzania, Mozambique, South Africa, Comoros, Madagascar, Seychelles, Mauritius, Reunion – with a view to sustaining the use and conservation of its marine resources. In pursuit of this, the Association:

- provides a forum for communication and exchange of information amongst its members that promotes and fosters inter-institutional linkages within and beyond the region;
- supports marine research by offering research grants;
- implements programmes to build the capacity of marine scientists and coastal management practitioners; and,
- works to promote policy dialogue on key topics by organising meetings and seminars on the findings and policy implications of science.

WIOMSA has approximately 1,000 individual members as well as about 50 institutional members from within and outside the region. This interdisciplinary membership consists of marine scientists, coastal practitioners, and institutions involved in the advancement of marine science research and development.

WIOMSA promotes marine science research through the award of research grants under the Marine Science for Management (MASMA) and the Marine Research Grant (MARG) programmes. Support in the form of a MARG III grant was given to the participant from Tanzania to cover her airfare.

**World Wildlife Fund - US (WWF-US)**

1250 24<sup>th</sup> Street, NW  
Washington, DC  
20037-1193  
USA

Tel: 1 202 293 4800  
Fax: 1 202 861 8324  
E-mail: [efn@wwfus.org](mailto:efn@wwfus.org)  
Web: [www.wwf-efn.org](http://www.wwf-efn.org)

Founded in 1961, the World Wildlife Fund (WWF) has been protecting the future of nature for 50 years. The world's leading conservation organisation, WWF works in 100 countries and is supported by 1.2 million members in the United States and over 5 million globally. WWF's unique way of working combines global reach with a foundation in science, involves action at every level from local to global, and ensures the delivery of innovative solutions that meet the needs of both people and nature. WWF is committed to reversing the degradation of our planet's natural environment and to building a future in which human needs are met in harmony with nature.

WWF's mission is the conservation of nature. Using the best available scientific knowledge and advancing that knowledge where it can, WWF works to preserve the diversity and abundance of life on Earth and the health of ecological systems by protecting natural areas and wild populations of plants and animals, including endangered species; promoting sustainable approaches to the use of renewable natural resources; and promoting more efficient use of resources and energy and the maximum reduction of pollution.

In recognition of the fact that effective policy, education, fieldwork, and other conservation initiatives depend on sound technical knowledge and skills, the WWF's Russell E. Train Education for Nature Programme (EFN) was established in 1994. Dedicated to Russell E. Train, WWF's founding trustee, past president, former chairman of the board, and current chairman emeritus, the programme aims to build a dynamic and highly qualified corps of conservation leaders in Africa, Asia, and Latin America. Through a number of initiatives that help build capacity of individuals and institutions, EFN provides potential and proven leaders with financial support for higher education, short-term training, and practical experience needed to take on conservation challenges in their home countries and regions.

Under the Russell E. Train EFN Programme, assistance was provided to the participants from Belize, the Philippines and Tanzania in the form of a contribution towards their expenses.

## LECTURERS & FIELD TRIP CO-ORDINATORS

Special thanks are due to all the lecturers and field trip co-ordinators, and particularly the key individuals who acted as module leaders, for their crucial and invaluable donation of time and expertise. Their contribution to the success of the training programme is gratefully acknowledged.

**Dr Yetunde Agbeja**, UN-Nippon Fellow, St Mary's University, Halifax, Nova Scotia, Canada & Lecturer, Department of Wildlife Fisheries Management, University of Ibadan, Ibadan, Nigeria

**Mr Masahiro Akiyama**, Chairman, Ocean Policy Research Foundation, Tokyo, Japan

**Ms Soulafa Al-Abbasi**, Coordinator - Community Capacity Building, Immigrant Settlement & Integration Services, Halifax, Nova Scotia, Canada

**Dr Peter Allen**, Professor, Department of Mechanical Engineering, Dalhousie University, Halifax, Nova Scotia, Canada

**Mr Bruce Anderson**, Multidisciplinary Hydrographer, Canadian Hydrographic Service (Atlantic), Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Dr Awni Behnam**, President, International Ocean Institute, Chatelaine, Switzerland

**Mr Doug Bertram**, Chief Executive Officer, Innovative Fishery Products Inc., Belliveau Cove, Nova Scotia, Canada

**Mr Paul Boudreau** (Module Leader), Project Manager, COINAtlantic, ACZISC Secretariat, Dalhousie University, Halifax, Nova Scotia, Canada

**Mr James Boxall**, Director, GIS Centre, & Curator, Map Collection, Dalhousie University, Halifax, Nova Scotia, Canada

**Ms Jennyfer Brickenden**, Librettist, Scojen Music Productions Ltd, Halifax, Nova Scotia, Canada

**Dr Mary Brooks**, William A. Black Chair of Commerce, School of Business Administration, Dalhousie University, Halifax, Nova Scotia, Canada

**Mr David Brown**, Senior Geologist, Canada-Nova Scotia Offshore Petroleum Board, Halifax, Nova Scotia, Canada

**Dr Tony Charles** (Module Leader), Professor of Management Science and Environmental Studies, Department of Finance and Management Science, St Mary's University, Halifax, Nova Scotia, Canada



**Dr Aldo Chircop**, Professor of Law & Director, Marine & Environmental Law Institute, Schulich School of Law, Dalhousie University, Halifax, Nova Scotia, Canada

**Mr Nathan Crowell**, Research Associate, Applied Geomatics Research Group, Centre of Geographic Sciences, Nova Scotia Community College, Middleton, Nova Scotia, Canada

**Mr Kristian Curran**, Oceans Biologist, Oceans and Coastal Management Division, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Dr Graham Daborn**, Honorary Research Associate, Acadia Centre for Estuarine Research, and Professor Emeritus, Department of Biology, Acadia University, Wolfville, Nova Scotia, Canada

**Mr Kevin Doucette**, CFO, Renewable Energy Services Ltd, Lower Sackville, Nova Scotia, Canada

**Mr David Dzidzornu**, Research and Graduate Assistant, Schulich School of Law, Dalhousie University, Halifax, Nova Scotia, Canada

**Commander Bob Edwards (ret'd)**, Research Fellow, Centre for Foreign Policy Studies, Department of Political Science, Dalhousie University, Halifax, Nova Scotia, Canada

**Ms Cecilia Engler**, Research Assistant, Marine & Environmental Law Institute, Schulich School of Law, Dalhousie University, Halifax, Nova Scotia, Canada

**Ms Alison Evans** (Module Leader), Senior Researcher & Biologist, CoastalPlanners, School of Architecture and Planning, Dalhousie University, Halifax, Nova Scotia, Canada

**Mr Gordon Fader**, Emeritus Scientist, Geological Survey of Canada (Atlantic), Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Dr Lucia Fanning**, Director & Associate Professor, Marine Affairs Programme, Dalhousie University, Halifax, Nova Scotia, Canada

**Mr Derek Fenton**, Team Leader, Species at Risk Management Division, Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Mr Amir Feridooni**, Faculty Liaison/Instructional Designer, MedIT, Dalhousie University, Halifax, Nova Scotia, Canada

**Ms Becky Field**, Administrator, Marine Affairs Programme, Dalhousie University, Halifax, Nova Scotia, Canada

**Capt. Deidre French**, Manager - Port Security & Marine Operations, Halifax Port Authority, Halifax, Nova Scotia, Canada

**Mr James Frost**, Principal Consultant, MariNova Consulting Ltd, Halifax, Nova Scotia, Canada

**Dr Susanna Fuller**, Marine Conservation Coordinator, Ecology Action Centre, Halifax, Nova Scotia, Canada

**Mr Matthew Gillis**, Deputy Director (Acting), Centre for Foreign Policy Studies, Department of Political Science, Dalhousie University, Halifax, Nova Scotia, Canada

**Professor Diana Ginn**, Associate Professor, Schulich School of Law, Dalhousie University, Halifax, Nova Scotia, Canada

**Mr Michel Goguen**, Director, Canadian Hydrographic Service (Maritimes), Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Mr David Griffiths** (Module Leader), Senior Research Fellow, IOI-Canada; & Resident Research Fellow, Centre for Foreign Policy Studies, Dalhousie University, Halifax, Nova Scotia, Canada; & Senior Research Fellow, International Centre for Emergency Management Studies, Cape Breton University, Sydney, Nova Scotia, Canada

**Ms Jennifer Hackett**, Oceans Data Manager, Oceans and Coastal Management Division, Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Mr Tim Hall**, Regional Manager, Oceans and Coastal Management Division, Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Mr Derek Harrison**, Senior Interpreter, Maritime Museum of the Atlantic, Halifax, Nova Scotia, Canada

**Dr Bruce Hatcher**, University Chair in Marine Ecosystem Research, Cape Breton University, Sydney, Nova Scotia, Canada

**Dr Richard Haworth**, Adjunct Professor, School of Public Administration, Dalhousie University, Halifax, Nova Scotia, Canada

**Ms Katherine Hay**, Campus Tours, Office of the Registrar, Dalhousie University, Halifax, Nova Scotia, Canada

**Mr Glen Herbert**, Section Head, Integrated Management, Oceans and Coastal Management Division, Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Mr J. Richard Hodgson** (Module Leader), Adjunct Professor, Marine Affairs Programme, Dalhousie University, Halifax, Nova Scotia, Canada

**Mr Chris Hudson**, Captain - Fundy Viper, CM Hudson Fisheries Ltd, Granville Ferry, Nova Scotia, Canada

**Mr Donald Humphrey**, Senior Environmental Analyst, Ecosystems Management Branch, Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Mr Raymond Jahncke**, GIS & Remote Sensing Analyst, GIS Centre, Dalhousie University, Halifax, Nova Scotia, Canada

**Mr Michael Johnston**, First Mate - Fundy Viper, c/o CM Hudson Fisheries Ltd, Granville Ferry, Nova Scotia, Canada

**Dr Alain Joseph**, Research Scientist, Applied Energy Research, Nova Scotia Community College, Dartmouth, Nova Scotia, Canada

**Ms Shalan Joudry**, Stone Bear Tracks and Trails, Bear River, Nova Scotia, Canada

**Mr Warren Joyce**, Shark Technician, Population Ecology Division, Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Mr Dusan Kadlec**, Painter, Dusan Kadlec Fine Art, Halifax, Nova Scotia, Canada

**Mr Paul Kennedy**, Host, CBC Ideas, Canadian Broadcasting Corporation, Toronto, Ontario, Canada

**Capt. Alan Knight**, Senior Marine Inspector, Transport Canada Marine Safety, Dartmouth, Nova Scotia, Canada

**Mr Joe Kozak**, Director, Environmental Programmes, Fundy Ocean Research Centre for Energy (FORCE), Halifax, Nova Scotia, Canada

**Dr Daniel Lane**, Chair, Ocean Management Research Network, & Professor, Telfer School of Management, University of Ottawa, Ottawa, Ontario, Canada

**Mr Tony LaPierre**, Vice-President, Marine Seismic and Survey, RPS Energy, Halifax, Nova Scotia, Canada

**Dr Jeremy Lee**, President, Sustainable Fish Farming Canada Ltd, Centre Burlington, Nova Scotia, Canada

**Dr Kathy Mac**, Poet & Associate Professor, Department of English, Saint Thomas University, Fredericton, New Brunswick, Canada

**Mr Kenneth A. MacInnis, QC**, Associate, Marine & Environmental Law Institute, Schulich School of Law, Dalhousie University, Halifax, Nova Scotia, Canada

**Mr Geordie MacLachlan**, Project Coordinator, Department of Fisheries and Aquaculture, Government of Nova Scotia, Halifax, Nova Scotia, Canada

**Mr Peter MacLellan**, Principal, Raeberry Communications, Smiths Cove, Nova Scotia, Canada

**Mr Scott Macmillan**, Composer & Guitarist, Scojen Music Productions Ltd, Halifax, Nova Scotia, Canada

**Mr Paul Macnab**, Biologist, Oceans and Coastal Management Division, Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Dr Patricia Manuel**, Associate Professor, School of Planning, Dalhousie University, Halifax, Nova Scotia, Canada

**Professor Ian McAllister**, Department of Economics, Dalhousie University, Halifax, Nova Scotia, Canada

**Capt. Angus McDonald**, National Councillor, Company of Master Mariners of Canada, Halifax, Nova Scotia, Canada

**Mr Derek McDonald**, Acting Regional Manager, Environmental Assessment and Major Projects Division, Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Dr David Mensink**, Psychologist, Counselling and Psychological Services, Dalhousie University, Halifax, Nova Scotia, Canada

**Mr Doug Mercer**, Lead Meteorologist, Atlantic Storm Prediction Centre, Meteorological Service of Canada, Environment Canada, Dartmouth, Nova Scotia, Canada

**Dr Anna Metaxas**, Professor, Department of Oceanography, Dalhousie University, Halifax, Nova Scotia, Canada

**Mr Frank Meuse Jr**, Stone Bear Tracks and Trails, Bear River, Nova Scotia, Canada

**Mr Norman Miller**, Director, Corridor Resources Inc., Halifax, Nova Scotia, Canada

**Mr Chris Milley**, Fisheries Advisor, Shubenacadie Band Council, & Principal, Nexus Coastal Resource Management, Hubley, Nova Scotia, Canada

**Ms Donna Morrissey**, Author, Halifax, Nova Scotia, Canada

**Dr David Mosher**, Senior Research Scientist, Geological Survey of Canada, Natural Resources Canada, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Mr Todd Mosher**, Cooke Aquaculture, Blacks Harbour, New Brunswick, Canada

**Mr Will Neily**, Horticultural Research Manager, Acadian Seaplants, Dartmouth, Nova Scotia, Canada

**Mr Terry Norman**, Director, Novus Consulting Group, Halifax, Nova Scotia, Canada

**Mr Robert O'Boyle**, Emeritus Scientist, Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada, & President, Beta Scientific Consulting Inc., Bedford, Nova Scotia, Canada

**Ms Michelle Paon**, Librarian, Killam Library, Dalhousie University, Halifax, Nova Scotia, Canada

**Dr Ronald Pelot**, Professor and Principal Investigator of MARIN, Department of Industrial Engineering, Dalhousie University, Halifax, Nova Scotia, Canada

**Dr Jon Percy**, Freelance Writer/Editor, SeaPen Communications, Granville Ferry, Nova Scotia, Canada

**Mr Ian Porter** (Module Leader), Freelance Journalist, Halifax, Nova Scotia, Canada

**Mr Jack Potter**, Diversity Outreach Programme Coordinator, Immigrant Settlement & Integration Services (ISIS), Halifax, Nova Scotia, Canada

**Ms Murielle Provost**, Senior Research Fellow, International Centre for Emergency Management Studies, Cape Breton University, Sydney, Nova Scotia; & Manager, Emergency Preparedness, City of Saint John, New Brunswick, Canada

**Dr Robert Rangeley**, Vice President - Atlantic Region, WWF-Canada, Halifax, Nova Scotia, Canada

**Mr David Roberts**, Aquaculture Specialist & Director, Sustainable Fish Farming Canada Ltd/BlueTech Ltd, Halifax, Nova Scotia, Canada

**Mr Brian Robinson**, Chemist, Ecosystem Research Division, Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Mr Carey Ryan** (Module Leader), Thackeray Consulting, Halifax, Nova Scotia, Canada

**Mr Eiji Sakai**, Chief Manager, International Affairs Team, Ocean Policy Research Foundation, Tokyo, Japan

**Professor Phillip Saunders**, Associate Professor, Schulich School of Law, Dalhousie University, Halifax, Nova Scotia, Canada

**Dr Nancy Shackell**, Term Research Scientist, Ecosystem Research Division, Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Dr John Shaw**, Research Scientist, Geological Survey of Canada, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Mr Andrew Sherin**, Director, Atlantic Coastal Zone Information Steering Committee (ACZISC) Secretariat, Dalhousie University, Halifax, Nova Scotia, Canada

**Dr Vladimir Shibanov**, Executive Secretary, Northwest Atlantic Fisheries Organisation, Dartmouth, Nova Scotia, Canada

**Dr Kent Smedbol**, Research Scientist, Department of Fisheries and Oceans, St Andrews Biological Station, St Andrews, New Brunswick, Canada

**Mr Leslie Smith**, Annapolis Tidal Generating Station, Annapolis Royal, Nova Scotia, Canada

**Ms Jennifer Strang**, GIS Analyst, GIS Centre, Dalhousie University, Halifax, Nova Scotia, Canada

**Mr Bud Streeter**, Vice President, Lloyd's Register North America, & President, Martec Ltd, Lloyd's Register Group, Dartmouth, Nova Scotia, Canada

**Mr Eric Theriault**, Advisor - Environmental Affairs, Canada-Nova Scotia Offshore Petroleum Board, Halifax, Nova Scotia, Canada

**Ms Linda Theriault**, Director - Public & Government Relations, Acadian Seaplants, Dartmouth, Nova Scotia, Canada

**Mr Nalan Thirupathi**, Plant Manager - Cornwallis, Acadian Seaplants, Dartmouth, Nova Scotia, Canada

**Mr Timothy Barron Tracey**, Independent Director, Machine Productions, Halifax, Nova Scotia, Canada

**Dr Jacob Verhoef**, Director, UNCLOS Programme, Geological Survey of Canada, Natural Resources Canada, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Dr Alain Vézina**, Acting Regional Director of Science, Regional Science Director's Office, Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Mr Addison Vickard**, Trainer, Eastern Canada Response Corporation, Dartmouth, Nova Scotia, Canada

**Dr Jay Walmsley**, Senior Environmental Analyst, Environmental Assessment and Major Projects Division, Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Mr John Webb**, Former Director of Emergency Social Services, Nova Scotia Department of Community Services, Halifax, Nova Scotia, Canada

**Dr Tim Webster**, Research Scientist, Applied Geomatics Research Group, Centre of Geographic Sciences, Nova Scotia Community College, Lawrencetown, Nova Scotia, Canada

**Dr Peter Wells** (Module Leader), Senior Research Fellow, IOI-Canada, Dalhousie University, Halifax, & former Head, Coastal and Water Science Section, Environmental Conservation Branch, Environment Canada, Dartmouth, Nova Scotia, Canada

**Mr Dirk Werle**, Partner & Geoscientist, AERDE Environmental Research, Halifax, Nova Scotia, Canada

**Ms Jennifer Weseloh McKeane**, Tourism Development Officer, Nova Scotia Department of Economic and Rural Development and Tourism, Halifax, Nova Scotia, Canada

**Mr Sean Weseloh McKeane**, Coastal Coordinator, Nova Scotia Department of Fisheries and Aquaculture, Halifax, Nova Scotia, Canada

**Ms Alexi Westcott**, Project Officer, Atlantic Coastal Zone Information Steering Committee (ACZISC) Secretariat, Dalhousie University, Halifax, Nova Scotia, Canada

**Ms Maxine Westhead**, Section Head, Protected Areas and Conservation Planning, Oceans and Coastal Management Division, Department of Fisheries and Oceans, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada

**Mr Hugh Williamson** (Module Leader), Adjunct Professor, Marine Affairs Programme, & Senior Research Fellow, IOI-Canada, Dalhousie University, Halifax, Nova Scotia, Canada

**Dr Martin Willison**, Adjunct Professor, Department of Biology, Dalhousie University, Halifax, Nova Scotia, Canada

**Dr Gil Winham**, Professor Emeritus of Political Science & Adjunct Professor of Law, Dalhousie University, Halifax, Nova Scotia, Canada

**Mr John Woods**, Vice President - Energy Development, Minas Basin Pulp and Power Co. Ltd, Hantsport, Nova Scotia, Canada

## **IOI STAFF, SENIOR RESEARCH FELLOWS & INTERNS**

Ms Jennifer Barr  
Finance Officer  
International Ocean Institute  
Dalhousie University  
6414 Coburg Road  
P.O. Box 15000  
Halifax, Nova Scotia, B3H 4R2  
Canada

Tel: 1 902 494 8018  
Fax: 1 902 494 1334  
E-mail: ioiadmin@dal.ca

Mr Michael Butler  
Director & 2011 Course Director  
International Ocean Institute  
Dalhousie University  
6414 Coburg Road  
P.O. Box 15000  
Halifax, Nova Scotia, B3H 4R2  
Canada

Tel: 1 902 494 1977  
Fax: 1 902 494 1334  
E-mail: michael.butler@dal.ca

Dr Ratana Chuenpagdee  
Senior Research Fellow  
International Ocean Institute  
and:  
Canada Research Chair in Natural Resource Sustainability and Community Development  
Department of Geography  
Science Building  
Memorial University of Newfoundland  
St John's, Newfoundland, A1B 3X9  
Canada

Tel: 1 709 737 3157  
Fax: 1 709 737 3119  
E-mail: ratanac@mun.ca

Ms Madeleine Coffen-Smout  
Programme Officer  
International Ocean Institute  
Dalhousie University  
6414 Coburg Road  
P.O. Box 15000  
Halifax, Nova Scotia, B3H 4R2  
Canada

Tel: 1 902 494 6918  
Fax: 1 902 494 1334  
E-mail: madeleine.coffen-smout@dal.ca



Ms Lara Green  
2011 Course Co-ordinator  
c/o International Ocean Institute  
Dalhousie University  
6414 Coburg Road  
P.O. Box 15000  
Halifax, Nova Scotia, B3H 4R2  
Canada

Tel: 1 902 494 1893  
Fax: 1 902 494 1334  
E-mail: lara.a.green@gmail.com

Mr David Griffiths  
Senior Research Fellow, International Ocean Institute  
and:

Tel: 1 902 435 6533  
E-mail: david.griffiths@dal.ca

Resident Research Fellow, Centre for Foreign Policy Studies, Dalhousie University  
and:

Senior Research Fellow, International Centre for Emergency Management Studies, Cape Breton University  
c/o Pendragon Applied Research  
402 - 5264 Morris Street  
Halifax, Nova Scotia, B3J 1B5  
Canada

Ms Rebecca Jamer  
Intern  
c/o International Ocean Institute  
Dalhousie University  
6414 Coburg Road  
P.O. Box 15000  
Halifax, Nova Scotia, B3H 4R2  
Canada

Tel: 1 902 494 8018  
Fax: 1 902 494 1334  
E-mail: becca.jamer@gmail.com

Mr Dan Mombourquette  
Intern  
c/o International Ocean Institute  
Dalhousie University  
6414 Coburg Road  
P.O. Box 15000  
Halifax, Nova Scotia, B3H 4R2  
Canada

Tel: 1 902 494 6918  
Fax: 1 902 494 1334  
E-mail: dmombour@dal.ca

Dr Peter Wells  
Senior Research Fellow  
International Ocean Institute  
Dalhousie University  
6414 Coburg Road  
P.O. Box 15000  
Halifax, Nova Scotia, B3H 4R2  
Canada

Tel: 1 902 237 0600  
Fax: 1 902 494 1334  
E-mail: oceans2@ns.sympatico.ca

Mr Hugh Williamson  
Adjunct Professor, Marine Affairs Programme  
& Senior Research Fellow, IOI  
Dalhousie University  
6414 Coburg Road  
P.O. Box 15000  
Halifax, Nova Scotia, B3H 4R2  
Canada

Tel: 1 902 423 7465  
E-mail: hughrw@hfx.eastlink.ca