



INTERNATIONAL OCEAN INSTITUTE



**35th ANNIVERSARY TRAINING PROGRAMME ON
*OCEAN GOVERNANCE: POLICY, LAW AND MANAGEMENT***

2015 COURSE REPORT



**Dalhousie University, Halifax, Canada
20th May – 17th July, 2015**

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INTERNATIONAL OCEAN INSTITUTE

2015 COURSE REPORT

**IOI-Canada
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INTRODUCTION

This report provides a record of the 2015 training programme on *Ocean Governance: Policy, Law and Management*, conducted by the International Ocean Institute (IOI) at Dalhousie University, Halifax, Canada. Held from 20th May to 17th July, this was the 35th annual course since the training programme was instituted by Elisabeth Mann Borgese, Founder of the IOI.



The programme was attended by 12 participants from a range of disciplines and backgrounds. A good balance of countries and regions was achieved, with participants from Africa, Asia, the Caribbean, Europe and South America. As usual, emphasis was placed on having strong female representation among the group, with equal numbers of women and men in the class. Lectures and presentations were delivered by over 100 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:** Ocean Sciences
- Module 3:** Integrated Coastal and Ocean Management
- Module 4:** Fisheries and Aquaculture
- Module 5:** Law of the Sea and Principled Ocean Governance
- Module 6:** Communication and Negotiation
- Module 7:** Maritime Security
- Module 8:** Marine Transportation
- Module 9:** Energy
- Module 10:** International Round Table and Conclusion of Training Programme

Photo credits (unless otherwise indicated): IOI-Canada staff/participants, Kevin Deagle

GROUP PHOTOGRAPH



Photo credit: Bruce Bottomley, Dalhousie University

Front row (from left to right): Hugh Williamson, Senior Research Fellow (Canada), Richard Florizone, President, Dalhousie University (Canada), Mike Butler, Director & 2015 Course Director (England/Canada), Jennifer Barr, Finance Officer (Canada), Annabel Fuller (Antigua & Barbuda), Peter Wells, Senior Research Fellow (Canada)

Second row: Paul Boudreau, Senior Research Fellow (Canada), Annika van Roy, 2015 Course Co-ordinator (The Netherlands), Chen Ning (China), Cheryl Rita Kaur Dalbir Singh (Malaysia), Nakita Dookie (Guyana), Dysi Polite Dyspriani (Indonesia)

Third row: Madeleine Coffen-Smout, Programme Officer (England), Dirk Werle, Chair, IOI Board (Germany), Gonzalo García de Arboleya de la Quintana (Spain), Xu Wei (China), Frederick Arnett II (Bahamas), Wu Min (China)

Top row: Zhang Wei (China), Ashyr Gurbannyyazov (Turkmenistan), Benedict Kyalo Kiilu (Kenya), Katie Short, IOI Course Assistant & Intern (Canada), David Griffiths, Senior Research Fellow (Canada)

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 30 countries. One of the earliest IOI centres to be established, it was set up 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-Canada/Dalhousie Oceans Advisory Committee and staffed by an experienced team of professionals, augmented by Senior Research Fellows and interns who contribute to its activities. IOI-Canada is the regional co-ordinator of the IOI Operational Centres in the Americas, namely 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.



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. Its goals are 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;
- 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 nearly 670 individuals from over 100 countries.

THE TRAINING PROGRAMME

Purpose and Approach

With the support of Dalhousie University, IOI has offered an intensive, interdisciplinary training programme in Halifax annually since 1981. This purpose of this flagship course 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 programme 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 course takes place on the campus of Dalhousie University, and consists of approximately 200 hours of intensive learning. While it is primarily lecture-based, it also includes interactive discussions, participant presentations, exercises and simulations, field trips and an international round table.



Participants

The training programme is specifically designed to benefit developing country mid-career professionals with responsibility for some aspect of coastal or ocean governance. 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 creating 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 2015 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 can be reviewed at <http://internationaloceaninstitute.dal.ca/2015LectureTopics.doc>.

SYLLABUS

MODULE 1 Orientation and Introduction to the Training Programme

Wednesday, 20th May

10.00 – 10.30	Introductions & Administrative Matters	Ms Annika van Roy (Module Leader)
10.45 – 12.00	Understanding Canada	Dr Jason Grek-Martin
1.30 – 2.45	Killam Library Tour	Ms Michelle Paon
3.00 – 4.00	Walking Tour of Upper Campus	Registrar's Office Tour Guide

Thursday, 21st May

9.00 – 10.30	Intercultural Awareness	Ms Joanne Fraser
10.45 – 12.00	Managing at University	Dr David Mensink
1.30 – 4.00	Ethical Issues in Ocean Governance	Prof. Ian McAllister

Friday, 22nd May

9.00 – 12.00	Organisation of Course Work, and Introduction to Modules & Module Leaders	Mr Mike Butler Module Leaders IOI staff
1.30 – 2.30	The Sea in Human History: the Oceanic Circle	Mr David Griffiths
2.30 – 3.00	Introduction to Simulation Exercise	Mr David Griffiths Ms Katie Short
4.00 – 6.00	Opening Ceremony	Dr Ratana Chuenpagdee All

Saturday, 23rd May

All day	Free. Optional morning trip to Farmers Market
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Sunday, 24th May

All day Free

MODULE 2 Ocean Sciences

Monday, 25th May

9.00 – 12.00	Introduction to Ocean Sciences, and Health of the Oceans	Dr Peter Wells (Module Leader)
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1.30 – 4.00	Fundamentals of Oceanography: Part 1	Dr Bob Fournier
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Tuesday, 26th May

9.00 – 12.00	Fundamentals of Oceanography: Part 2	Dr Bob Fournier
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1.30 – 4.00	Land/Sea Interface: Estuarine and Coastal Waters	Dr Graham Daborn
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Wednesday, 27th May

9.00 – 12.00	Climate Change	Dr John Shaw
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1.30 – 4.00	Marine Biodiversity: Census of Marine Life, Ocean Biogeographic Information System, and Ocean Tracking Network	Mr Bob Branton Ms Mary Kennedy Ms Lenore Bajona
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Thursday, 28th May

9.00 – 10.30	Vulnerability Assessment for Climate Change Adaptation	Dr Danika van Proosdij
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10.45 – 12.00	Simulation Exercise: Session 2	Mr David Griffiths
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1.30 – 4.00	Remote Sensing of the Ocean	Mr Dirk Werle
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4.00 – 4.15	Module Wrap-up	All
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Friday, 29th May

All day	Field Trip: Bedford Institute of Oceanography	Mr Scott Coffen-Smout Ms Jacinthe Cormier Dr Blair Greenan Mr Glen Herbert Mr Marty King Dr Youyu Lu Mr David Martin Ms Cathy Merriman Mr Brian Robinson Dr Alain Vézina Mr Dustin Whalen Ms Annika van Roy
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Saturday, 30th May

All day	Free
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Sunday, 31st May

All day	Free
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<p>MODULE 3 Integrated Coastal and Ocean Management</p>

Monday, 1st June

9.00 – 12.00	Planning in Coastal Regions	Dr Patricia Manuel
1.30 – 4.00	Coastal Information Management	Mr Paul Boudreau (Module Leader) Dr Bertrum MacDonald Ms Sarah Chamberlain Ms Shelby McLean Mr Lee Wison

Tuesday, 2nd June

9.00 – 12.00	Introduction to ICOM	Dr Lucia Fanning
1.30 – 4.00	Project Cycle	Prof. Ian McAllister

Wednesday, 3rd June

9.00 – 12.00	Ecological Economics	Dr Peter Tyedmers
1.30 – 4.00	Marine Spatial Planning	Mr Paul Macnab Mr Scott Coffen-Smout

Thursday, 4th June

10.15 – 12.00	COINAtlantic (<i>GIS Lab</i>)	Mr Andy Sherin Ms Alexi Westcott
1.30 – 4.00	Simulation Exercise: Session 3	Mr David Griffiths

Friday, 5th June

9.00 – 10.30	Ocean Weather and Forecasting	Mr Doug Mercer
10.45 – 12.00	Ocean Education and Awareness	Ms Liz Muaror-Wilson Ms Gillian Fielding Ms Anna Naylor
1.30 – 4.00	Mangroves and Human Security	Dr Brad Walters
4.00 – 4.15	Module Wrap-up	All

Saturday, 6th June

All day	Free
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Sunday, 7th June

All day	Free
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<p style="text-align: center;">MODULE 4 Fisheries and Aquaculture</p>
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Monday, 8th June (World Ocean Day)

9.00 – 12.00	Introduction to Module and Fishery Governance Issues	Dr Tony Charles (Module Leader)
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1.30 – 4.00	Fishery Science	Dr Ross Claytor
7.00 onwards	Elisabeth Mann Borgese Ocean Lecture – Panel on <i>The Ocean and You: Why Does It Matter?</i>	Dr Doug Wallace Dr Kumiko Azetsu-Scott Ms Heather Kelday Mr Bud Streeter Dr Boris Worm

Tuesday, 9th June

9.00 – 12.00	Ecosystem-based Fishery Management	Dr Nancy Shackell Dr Ahmed Khan
1.30 – 4.00	Small-scale Fisheries	Dr Tony Charles Ms Katie Schleit

Wednesday, 10th June

9.00 – 10.30	High Seas Fisheries	Dr Susanna Fuller
10.45 – 12.00	Fisheries and Large Marine Ecosystems	Dr Barbara Paterson
1.30 – 4.00	Field Trip: Northwest Atlantic Fisheries Organisation	Mr Fred Kingston

Thursday, 11th June

9.00 – 9.45	Simulation: study period	Participants
10.00 – 10.30	Briefing: Dalhousie's Marine Affairs Program	Ms Becky Field
10.30 – 11.15	Participant Presentation	Participants
11.15 – 12.00	Coastal Communities and Fisheries: Case Study of a Brazilian Mangrove Community (documentary)	Ms Cintia Gillam
1.30 – 2.45	Marine and Fisheries Conservation	Dr Sean Brilliant
3.00 – 4.30	Participant Presentations	Participants

Friday, 12th June

9.00 – 10.30	Seafood Value Chain	Mr Lew Clancey
10.45 – 12.00	Participant Presentations	Participants

1.30 – 4.00	Aquaculture	Mr David Roberts
4.00 – 4.15	Module Wrap-up	All

Saturday, 13th June

All day	Free
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Sunday, 14th June

All day	Free
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<p>MODULE 5 Law of the Sea and Principled Ocean Governance</p>
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Monday, 15th June

All day	Introduction to Law of the Sea	Mr Hugh Williamson (Module Leader)
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Tuesday, 16th June

9.00 – 10.30	Introduction to Law of the Sea (cont.)	Mr Hugh Williamson
10.45 – 12.00	Simulation Exercise: Session 4	Mr David Griffiths
1.30 – 4.00	Places of Refuge	Dr Aldo Chircop

Wednesday, 17th June

9.00 – 12.00	Technical Aspects of Maritime Boundary Delimitation	Mr Galo Carrera
1.30 – 4.00	Precautionary Principle	Dr Tony George Puthucherril

Thursday, 18th June

9.00 – 12.00	Polluter Pays	Mr Kenneth MacInnis, QC
1.30 – 2.45	Article 76 of UNCLOS: Applications in the Arctic	Dr David Mosher
3.00 – 4.00	Participant Presentations	Participants

Friday, 19th June

9.00 – 10.30	Salmonid Fisheries	Dr Fred Whoriskey
10.45 – 11.30	Participant Presentations	Participants
1.30 onwards	Field Trip to Bay of Fundy: Sustainable Blue Fish Farm, Evangeline Beach	Mr Kirk Havercroft Dr Graham Daborn Ms Annika van Roy

Saturday, 20th June

All day	Field Trip to Bay of Fundy: Annapolis Royal Marsh Nature Trail, Annapolis Tidal Power Station, Fort Anne, Clean Annapolis River Project, Habitation	Dr Jon Percy Mr Leslie Smith Ms Katie McLean Dr Peter Wells Ms Annika van Roy
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Sunday, 21st June

All day	Field Trip to Bay of Fundy: Fundy Adventures, Stone Bear Tracks and Trails	Ms Wanda Van Tassel Mr Frank Meuse Ms Shalan Joudry Ms Annika van Roy
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Monday, 22nd June

All day	Field Trip to Bay of Fundy: Provincial Fisheries Presentation, Acadian Seaplants, Lunenburg Fisheries Museum, Mahone Bay	Mr Bill Whitman Ms Amber Creamer Mr Brennan Goreham Mr Kris Vascotto Mr Will Neily Ms Annika van Roy
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<p style="text-align: center;">MODULE 6 Communication and Negotiation</p>

Tuesday, 23rd June

9.00 – 12.00	Recuperation/Study Period	Participants
1.30 – 4.00	Introduction to Module, and Media	Mr Ian Porter (Module Leader) Prof. Kim Kierans
4.00 – 5.00	Participant Presentation	Participants

Wednesday, 24th June

9.00 – 12.00	How to Present	Mr Ian Porter Prof. Kim Kierans
1.30 – 4.00	Communications	Mr Peter MacLellan

Thursday, 25th June

All day	Interview and Presentation Skills	Prof. Kim Kierans Mr Ian Porter Mr Tim Tracey
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Friday, 26th June

9.00 – 12.00	Negotiation Theory and Practice	Mr Hugh Williamson
1.15	Class photograph	All
1.30 – 4.00	Performance Management	Mr Mike Haley
4.00 – 4.15	Module Wrap-up	All

Saturday, 27th June

All day	Free
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Sunday, 28th June

All day	Free
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<p>MODULE 7 Maritime Security</p>
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Monday, 29th June

9.00 – 12.00	Simulation Exercise: Session 5	Mr David Griffiths
1.30 – 4.00	Introduction to Module, and Maritime Security Issues	Mr David Griffiths (Module Leader)

4.00 – 4.30	Participant Presentation	Participants
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Tuesday, 30th June

9.00 – 12.00	Emergency Management in the Coastal Zone	Ms Murielle Provost Ms Joanne Lawlor
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1.30 – 2.45	Emergency Management in the Coastal Zone (cont.)	Ms Murielle Provost Dr Mélanie Fournier
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3.00 – 4.00	Simulation: study period	Participants
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Wednesday, 1st July

All day	Free: Canada Day holiday
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Thursday, 2nd July

9.00 – 10.30	Introduction to Integrated Maritime Compliance and Enforcement (IMCE)	Cdr Bob Edwards (ret'd) Mr Glen Herbert
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10.45 – 12.00	IMCE Exercise	Cdr Bob Edwards (ret'd) Mr Glen Herbert
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1.30 – 4.00	IMCE Exercise (cont.)	Cdr Bob Edwards (ret'd) Mr Glen Herbert
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Friday, 3rd July

9.00 – 12.00	IMCE Exercise (cont.)	Cdr Bob Edwards (ret'd) Mr Glen Herbert
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1.30 – 4.00	IMCE Exercise (cont.)	Cdr Bob Edwards (ret'd) Mr Glen Herbert
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4.00 – 4.15	Module Wrap-up	All
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Saturday, 4th July

All day	Free
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Sunday, 5th July

All day Free

<p style="text-align: center;">MODULE 8 Marine Transportation</p>
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Monday, 6th July

9.00 – 12.00	Shipping Fundamentals	Mr Dick Hodgson
1.30 – 4.00	Evolution of Containerisation	Mr Jim Frost (Module Leader)

Tuesday, 7th July

9.00 – 12.00	The Human Element in International Shipping	Capt. Angus McDonald
1.30 – 4.00	Safety of Ships	Capt. Alan Knight

Wednesday, 8th July

9.00 – 10.45	Participant Presentations	Participants
11.00 – 12.00	Simulation Exercise: Session 6	Mr David Griffiths
1.30 – 2.45	Study Period	Participants
3.00 – 4.00	Introduction to Maritime Search and Rescue	Mr John Dalziel

Thursday, 9th July

9.00 – 10.30	Field Trip: Eastern Canada Response Corporation	Mr Darin Connors Ms Annika van Roy
10.30 – 11.30	Field Trip: Survival Systems Training Ltd	Mr Peter Konings Ms Annika van Roy
11.45 – 12.30	Field Trip: HMCS Sackville	Mr David Griffiths
1.00 – 4.00	Field trip: Port of Halifax – lunch, boat tour of port, lecture on Shipping Trade: Realities and Public Policy	Mr Patrick Bohan Mr Aaron Dickson

MODULE 9 Energy

Friday, 10th July

9.00 – 12.00	Introduction to Module	Dr Alain Joseph (Module Leader)
1.30 – 2.45	Introduction to Geology	Mr David Brown
3.00 – 4.00	Regulation and the Canadian Environmental Assessment Agency (CEAA)	Mr Eric Theriault

Saturday, 11th July

All day	Simulation Exercise: Preparation of Presentations	Participants
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Sunday, 12th July

All day	Simulation Exercise: Preparation of Presentations	Participants
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Monday, 13th July

9.00 – 10.30	Exploration and Risk	Mr Scott McDonald
10.45 – 12.00	Introduction to Geophysics	Mr Kris Kendell
1.30 – 2.45	Tidal Power: Technical Aspects	Mr John Woods
3.00 – 4.00	Tidal Power: Biological Aspects	Ms Anne-Marie Belliveau

Tuesday, 14th July

9.00 – 10.30	Wind Power	Mr Kevin Doucette
10.45 – 12.00	Solar Power	Dr Wayne Groszko
1.30 – 2.45	Elisabeth Mann Borgese Archives	Mr Creighton Barrett
3.00 – 4.00	The Challenge of Ocean Governance in Areas Beyond National Jurisdiction (ABNJ)	Dr Awni Behnam

<p>MODULE 10 International Round Table Conclusion of Training Programme</p>
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Wednesday, 15th July

All day International Round Table

Dr Awni Behnam
 Mr David Dzidzornu
 Dr Dan Lane
 Ms Katie Schleit
 Mr David Griffiths
 Participants

Thursday, 16th July

All day International Round Table

Dr Awni Behnam
 Mr David Dzidzornu
 Dr Dan Lane
 Ms Katie Schleit
 Mr David Griffiths
 Participants

4.30 – 6.30 Closing Ceremony and Reception

All

Friday, 17th July

9.30 – 12.00 Feedback, What Next? and Closing Remarks

IOI Staff/Module Leaders
 Participants



COURSE DIRECTOR'S REPORT

As with previous courses, the planning and organization of IOI-Canada's 35th Ocean Governance Training Program was a collaborative effort of the staff: Madeleine Coffen-Smout (Programme Officer), Jennifer Barr (Finance Officer), Annika van Roy (2015 Course Co-ordinator) and myself as the 2015 Course Director and Director of IOI-Canada. Critical to the scientific rigour of the Course curriculum were the advice and guidance provided by IOI-Canada's nine Senior Research Fellows (SRFs): Paul Boudreau, Dr Tony Charles, Dr Ratana Chuenpagdee, Scott Coffen-Smout, Dr Susanna Fuller, David Griffiths, Dr Larry Hildebrand, Dr Peter Wells and Hugh Williamson. In addition to providing intellectual input, the SRFs contributed their time to key components of the Course such as serving as Module Leaders, lecturing, co-ordinating field trips, designing and managing the Course-long Simulation Exercise, and organizing the annual Elisabeth Mann Borgese Ocean Lecture.

The Training Program has significantly evolved over its 35 years of existence. Initially, under the leadership of our founder, Elisabeth Mann Borgese, the Course focussed on the then new Law of the Sea and its various sub texts. Elsewhere in the Course Report are the details of the ten modules that provide a comprehensive review of all aspects of Ocean Governance as presently interpreted. The organisation of the Training Program benefits significantly from the Course Evaluations that each participant provides regarding the modules and lectures therein. A half-day debrief on the last day of the Course provides a further in-depth review of "what works" and "what doesn't". On the basis of the feedback from participants, my own observations as Course Director (present in the classroom on a daily basis) and subsequent discussions with lecturers and Senior Research Fellows, the Training Program begins its gestation and formulation for the following year.

We are very appreciative and aware of the unique situation of having more than 100 lecturers who



provide their expertise on a *pro bono* basis, and a generous host University that gives significant in-kind support. This – and the fact that Halifax is the home of the Bedford Institute of Oceanography, a plethora of marine-oriented industries, five universities, a major port and the home of Canada's East Coast Navy – provides the necessary environment and ingredients for a world class Course. A quote from the Halifax Partnership's promotion of the city provides a complementary perspective:

"Given its strategic location, the ocean-related focus of its post-secondary institutions, and the depth of its science-based workforce, it's no surprise that Nova Scotia is a world leader in oceans. With 7,579 kilometres of coastline, Nova Scotia is home to more than 450 oceans-related PhDs, 200

companies and 60 high tech innovators. The Province's capital city, Halifax, is the hub of oceans related business and research."

The Course began on May 20 with the traditional Orientation Module which culminated in the official Opening Ceremonies on Friday, May 22 held in the Great Hall of Dalhousie University. All of the welcoming panel were valued friends of IOI-Canada, namely Patricia Rodee, Director, International Research and Development, Dalhousie University; Dr Alain Vézina, Regional Director of Science and Director of Bedford Institute of Oceanography, Department of Fisheries and Oceans; Jennifer Watts, Councillor, District 8, Halifax Regional Municipality; and Andrew Younger, Member of the Nova Scotia Legislative Assembly, Dartmouth East. Annabel Fuller of Antigua and Barbuda responded to the collective words of welcome, on behalf of this year's participants. The keynote address, entitled "Small is beautiful: A look at the ocean sector that is too big to ignore", was presented by Dr Ratana Chuenpagdee, a Senior Research Fellow at IOI-Canada, and the Canada Research Chair in Natural Resource Sustainability and Community Development at Memorial University in Newfoundland. This stimulating presentation was followed by a reception which concluded the evening's ceremony.

The highlight of Oceans Day this year for IOI-Canada was the presentation of the annual Elisabeth Mann Borgeese Ocean Lecture that evening. This public lecture series was launched in 2005 to commemorate and celebrate the life and work of Elisabeth. This year, in collaboration with the Museum of Natural



History and the Ecology Action Centre, IOI-Canada organized a panel to discuss "The Ocean and You: Why does it Matter?" The distinguished panellists were Dr Kumiko Azetsu-Scott (Bedford Institute of Oceanography), Heather Kelday (Nova Scotia Sea School), Bud Streeter (Lloyd's Register Canada) and Dr Boris Worm (Biology Department, Dalhousie University). The panel was chaired by Dr Doug Wallace (Department of Oceanography, Dalhousie University). The panellists covered all perspectives of the topic from the science to the aesthetic, then engaged with the audience, all of which was very much appreciated by the capacity (130) audience. The reception that followed provided an excellent opportunity to view marine-themed exhibits in the museum.



With the course being primarily lecture-based, field trips provided a necessary change from the intensive classroom sessions. They also provided an opportunity for the participants to experience some of Nova Scotia's coastal industries and people. The three-day trip to the Annapolis Valley included visits to a unique land-based aquaculture site (Sustainable Fish Farming Canada Ltd); Evangeline Beach; a family-run seaweed operation in Gulliver's Cove; a First Nation retreat (Stone Bear Tracks and Trails) in Bear River; Acadian Seaplants with its innovative research; the Annapolis Tidal Power Station; numerous cultural sites (e.g. Fort Anne and Port-Royal); and, via Kejimikujik National Park, the famed Fisheries Museum located in Lunenburg, a UNESCO World Heritage site. As always we were welcomed, well fed



and housed at Cornwallis Park, a former Naval Training Base with a superb view of the Cornwallis estuary and the port of Digby in the distance. Other equally instructive field trips were visits to the Bedford Institute of Oceanography with a tour of facilities, including Canada's premier ocean research vessel, the CCGS Hudson and lectures from resident scientists. This one-day visit was very capably orchestrated by Scott Coffen-Smout, an alumnus of the Training Program and now one of our Senior Research Fellows. Other field trips included visits to the Northwest Atlantic Fisheries Organization



(NAFO) in Dartmouth, where Fred Kingston and his team provided a comprehensive overview of the roles and responsibilities of this important regional fisheries management organisation (RFMO); the Canadian Naval Memorial, HMCS Sackville, a WW2 Corvette and subsequently an oceanographic research vessel at BIO before its final role; the Eastern Canada Response Corporation (oil spill mitigation); Survival Systems Training,

with its very real emergency simulations; and the Port of Halifax which involved a briefing on its activities and an instructive boat tour of the port and its facilities.

The course-long Simulation Exercise, involving the preparation by the participants of an Ocean Governance Plan for a fictitious country(ies), continues to be the thread that binds together the ten modules. David Griffiths has been further developing this exercise and this year was assisted by Katie Short, an IOI-Canada intern. An increasing number of the module lecturers are customizing portions of their presentations and exercises to complement the Simulation Exercise thus providing the participants with current research and data. A prime example is the two-day Integrated Maritime Compliance and Enforcement (IMCE) exercise organized by Commander Bob Edwards (ret'd), an IOI alumnus. The results of the Simulation Exercise were presented in the final week to a group of distinguished panellists:

Dr Awni Behnam (IOI Honorary President); David Dzidzornu (Schulich School of Law, Dalhousie University); Dr Dan Lane (University of Ottawa); and Katie Schleit (Ecology Action Centre). Once again David Griffiths chaired the event in the Lord Dalhousie Room at Dalhousie University, which provides the ideal ambiance for the occasion.

The culmination of the 8-week Training Program was the Closing Ceremony held at the University Club. As in previous years Dr Behnam, assisted by Annika van Roy and myself, presented the participants with their certificates and lapel pins. These ceremonies gave me, once again, an opportunity to thank the numerous groups and individuals that make this Training Program possible, including IOI Headquarters in Malta, this year represented by both our Honorary President and Peter Leder, IOI Treasurer; the IOI-Canada Board of Directors, chaired by Dirk Werle; the Ocean Governance Training Foundation Board of Directors, chaired by Brian Flemming, QC; the IOI-Canada/Dalhousie University Ocean Advisory Committee, chaired by Dr David Vanderzwaag; the 100 plus lecturers, the host families and the all-important funders listed in detail elsewhere in this report. Dr Behnam welcomed the participants to their new role as Ocean Ambassadors and the responsibilities that they must now assume. Ian Porter, a graduate of the 1996 Training Program, then welcomed them as members of the IOI-Canada Alumni Association. Wu Min of China responded with both eloquence and humour on behalf of the participants. Flowers for Madeleine and Annika, photographs and a wine and cheese reception provided the closure for the Training Program.



A final thought: it was a particular pleasure working with this year's participants – the group dynamic was outstanding; interaction with colleagues and lecturers was excellent, and an increase in leadership abilities among all of the participants became readily apparent. Many of them are already reporting back to IOI-Canada on how they value their course experience and are utilising the Ocean Governance material provided. Progress indeed!

Michael J.A. Butler
2015 Course Director

PARTICIPANTS



Antigua and Barbuda: Ms Annabel Fuller, Executive Assistant to Director/Registrar General, Department of Marine Services and Merchant Shipping, St John's

Bahamas: Mr Frederick Arnett II, Assistant Fisheries Officer, Department of Marine Resources, Ministry of Agriculture and Marine Resources, Nassau

China: Ms Chen Ning, Staff Member, Publicity and Education Centre, State Oceanic Administration, Beijing

China: Ms Wu Min, Deputy Director, Comprehensive Office, State Oceanic Administration, Beijing

China: Mr Xu Wei, Professor & Deputy Director, National Ocean Technology Centre, State Oceanic Administration, Tianjin

China: Mr Zhang Wei, Staff Officer, Legal Affairs Division, China Coast Guard, State Oceanic Administration, Beijing

Guyana: Ms Nakita Dookie, Fisheries Officer, Fisheries Department, Ministry of Agriculture, Bourda, Georgetown

Indonesia: Ms Dysi Polite Dyspriani, Coastal Community Empowerment Analyst, Directorate of Coastal Community Empowerment and Business Development, Ministry of Marine Affairs and Fisheries, Jakarta



Kenya: Mr Benedict K. Kiilu, Principal Fisheries Officer, State Department of Fisheries, Mombasa

Malaysia: Ms Cheryl Rita Kaur Dalbir Singh, Senior Researcher, Centre for Coastal & Marine Environment, Maritime Institute of Malaysia, Kuala Lumpur

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In addition, sincere thanks are due to the various organisations which contributed to the 2015 programme by hosting the class and/or assisting with field trips or the EMB Lecture. These included Acadian Seaplants, Annapolis Tidal Power Station, Bear River First Nation Cultural Centre - Stone Bear Tracks and Trails, Bedford Institute of Oceanography/Department of Fisheries and Oceans, Clean Annapolis River Project, Eastern Canada Response Corporation, Ecology Action Centre, Fundy Adventures, Halifax Port Authority, HMCS Sackville, Museum of Natural History, Northwest Atlantic Fisheries Organization, Nova Scotia Provincial Fisheries, Survival Systems Training Ltd, and Sustainable Fish Farming Canada. Finally, acknowledgement should also be given to Cape Breton University for generously contributing to the expenses of sending a staff member to lecture on the course.



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Established in its modern form in 1986, the Department of Marine Services and Merchant Shipping (ADOMS) is the Maritime Administration of Antigua and Barbuda. Its mission is to “achieve client satisfaction through the provision of a quality service, whilst ensuring compliance with international maritime Conventions for maritime safety, security, environmental protection and the welfare of seafarers.”

ADOMS is headquartered in St John's in Antigua and has two additional offices in Germany, in Oldenburg and Bremerhaven. It is certified to the ISO 9001:2008 standard and recently completed the Voluntary IMO Member State Audit (VIMSAS) process in all three offices. The Antigua and Barbuda flag is on the 'white' list for the Paris Memorandum on Port State Control and as such is recognised as a quality flag.

The fully fledged international registry, maintained from St John's, has nearly 1,400 registered ships aggregating to more than 11 million gross tons. It is ranked among the top 20 in the world's merchant fleet in numerical terms and is internationally recognised by ship owners, international ship financing banks, Port States, Flag States and the IMO. Its Mega Yacht Registry, launched in 2011, has approximately 240 yachts of varying sizes.

Antigua and Barbuda has a worldwide coverage of over 200 inspectors for its commercial ships and has signed agreements with nine Recognised Organisations and Recognised Security Organisations, all of whom are International Association of Classification Societies (IACS) members. Acting for and on behalf of the Administration, they perform statutory surveys and inspections and issue statutory certificates.

At the regional level, ADOMS plays a leading role in the wider Caribbean area and its Director is Chairman of the Caribbean MOU on Port State Control, and Ambassador of Antigua and Barbuda to the Association of Caribbean States, as well as the Permanent Representative of Antigua and Barbuda to the IMO. ADOMS is currently taking the lead in the review and re-writing of the Caribbean Small Commercial Vessel Code, in co-ordinating the region's work on hydrographic surveys and in other key regional initiatives.

ADOMS provided the airfare for one of its staff members to assist with her participation in the course.

Caribbean Regional Fisheries Mechanism

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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 & Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St Kitts & Nevis, St Lucia, St Vincent & the Grenadines, Suriname, Trinidad & Tobago, and Turks & 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. Supported by the Executive Committee, 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 enabled two fisheries officers from the Bahamas and Guyana to attend the course.

Dalhousie University

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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 in Halifax and with its recently acquired agricultural campus in Truro, it currently offers 4,000 courses in more than 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 18,500 full and part-time students. These come from across Canada and from more than 115 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 89 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 \$140 million in external research grants and awards each year. Many of its researchers are nationally and internationally recognised for their work, and the university is home to 50 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 IOI course in 1981, Dalhousie University has provided crucial in-kind support to this 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.

IOI-China

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IOI-China was established in 1994 as one of the earliest Operational Centres in the International Ocean Institute's network, and in 2004 it evolved into the Regional Centre for the Western Pacific Region. It is hosted by the State Oceanic Administration and operates out of SOA's National Marine Data and Information Service in Tianjin.

IOI-China focuses on interdisciplinary and intersectoral training and research covering:

- ocean governance, policy, law, EEZ and coastal community management, and development of related resources for the sustainable livelihoods in coastal areas;
- fisheries and coastal aquaculture management;
- sustainable development of seabed resources;
- development and protection of island resources;
- management of ports and harbours, and sustainable development of large coastal urban centres;
- marine pollution abatement, prevention, and control;
- advancement of marine science and technology and related training;
- development of national marine related legislation and marine policy and building of national infrastructure;
- national and regional multi-hazards disaster early warning systems, shoreline change and erosion, sea level rise due to impacts of climate change, community awareness and resilience, and community and school-based adaptive management;
- marine and other related forms of eco-tourism; and,
- regional and international co-operation and co-ordination.

Its main activities include:

- training courses with ship-board training using SOA research vessels;
- research projects on the implications of UNCLOS and UNCED;
- organisation of regional hearings on ocean affairs for the Asia-Pacific Region;
- contributions to the preparation of the China Ocean Agenda 21;
- organisation of seminars on the implementation of UNCLOS and harmonisation of national marine laws and regulations with UNCLOS provisions;
- organisation of Pacem in Maribus Conference XXIV (1996) and XXXIII (2010);
- publication of newsletters and reports; and,
- organisation of international alumni workshops.

IOI-China provided the airfares for four SOA staff members to attend the course.

IOI Headquarters

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The International Ocean Institute (IOI) was founded in 1972 by Professor Elisabeth Mann Borgese as an international knowledge-based institution, devoted to the sustainable governance of the oceans. Its establishment was a milestone in the struggle to promote the peaceful and sustainable uses of ocean space and coasts as well as the management and conservation of the ocean and its resources so that future generations could share in their benefits. As a non-governmental body with special consultative status at the United Nations, IOI works to uphold and expand the principle of the common heritage as enshrined in the UN Convention of the Law of the Sea. Its main contributor and supporter is the Ocean Science and Research Foundation.

IOI operates through a worldwide network of Centres and Focal Points, with its Headquarters hosted by the Government of Malta at the premises of the University of Malta. From here, IOI-HQ proposes and leads projects in line with the IOI mission, including the global co-ordination of the IOI training programmes and capacity-building mission, while also fundraising and serving as an administrative node, document repository and information centre for the institute. In addition, IOI-HQ is the centre of a communications node linking the network of IOI centres and alumni with a global audience through the periodical e-bulletin *IOInforma*, and also connecting the IOI network with the IOI Governing Board and Steering Committee through the quarterly IOI e-News. Other work in this respect includes the production and dissemination of the IOI Annual Report, and implementation of promotional efforts such as the maintenance of the IOI-HQ website. As the seat of the IOI Secretariat, IOI-HQ serves to support the IOI Governing Board and implement their decisions.

Other recent and/or ongoing HQ initiatives include the administration and awarding of the Elisabeth Mann Borgese Bursary and Danielle de St Jorre Scholarship, co-ordination of the IOI modules in the Master's Degree Programme on Ocean Governance which is offered at the University of Malta in partnership with the IOI, and co-ordination of OceanLearn. Through MOUs/MOAs and meetings around the world, HQ also works to ensure strong and continuing support and collaboration with local, regional and international institutions and organisations.

IOI-HQ provided funding to enable the participants from Spain and Turkmenistan to attend the IOI-Canada course.

Kenya Coastal Development Project

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The Kenya Coastal Development Project (KCDP) is a World Bank funded, multi-sectoral project being implemented by government institutions based in Kenya's coastal region. These institutions include: the State Department of Fisheries, Kenya Marine and Fisheries Research Institute, Coast Development Authority, Kenya Wildlife Service, Kenya Forestry Research Institute, Department of Physical Planning, and National Environment Management Authority. Starting in 2010, the project implementation is over a period of six years and is financed by the World Bank at a cost of US \$40 million.

KCDP's Project Development Objective is to promote environmentally sustainable management of Kenya's coastal and marine resources by strengthening the capacity of existing relevant government agencies and by enhancing the capacity of rural micro, small and medium-sized enterprises in selected coastal communities. Its Global Environmental Objective is to strengthen the conservation and sustainable use of marine and coastal biodiversity and to support climate change mitigation initiatives.

The KCDP is structured into four components which include:

- Sustainable Management of Fisheries Resources, with the objective of increasing revenue generation to the Government of Kenya through sound monitoring, control and surveillance and a transparent process of licensing of foreign fishing vessels. Other goals are to promote research for value addition, market chain analysis, promotion of aquaculture, alternatives beyond reef fishing and overall improvement of fisheries governance.
- Sound Management of Natural Resources, with the aim of improving the sound management and regeneration of natural resources and biodiversity in the coastal and marine environment as well as provide assistance to communities in the development of eco-tourism ventures.
- Support for Alternative Livelihoods, which aims to promote sustainable livelihoods within a sound governance framework that includes spatial planning and land capability mapping to identify sensitive areas, Integrated Coastal Management, and compliance with environmental regulations and safeguards. Within this institutional framework, the component aims to support community investments and Small Micro-Enterprises.
- Capacity Building, Monitoring & Evaluation System, Project Management, Communication and Development Fund for the Coast, which aims to promote capacity in the project coordination and implementation teams, promote dialogue amongst national partners and regional stakeholders, develop a communication strategy for development outreach and establish an overall funding mechanism for small community-based, coastal development projects.

The KCDP fully funded the tuition and living expenses for a member of staff from Kenya's State Department of Fisheries to attend the IOI training programme.

Maritime Institute of Malaysia

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Incorporated in 1993, the Maritime Institute of Malaysia (MIMA) is a policy research institute established by the Malaysian government to deal with national, regional and global maritime issues. Its mission is to “provide maritime-related advice and consultancy to stakeholders through policy research, training, education and public awareness programmes.”

MIMA has five research centres supported by an Administration Unit and a Resource Centre. Its principal activities are conducting policy research on maritime issues to safeguard Malaysia's maritime interests and to disseminate information on maritime matters to the public. Among the products and services offered by MIMA are policy papers, publications (in print and online), advisory, consultancy, workshops/training courses and events such as talks, forums, seminars and conferences, all related to maritime issues.

The research areas of MIMA mirror the organisational set-up of its research centres, namely:

- Coastal and Marine Environment
- Maritime Economics and Industries
- Maritime Security and Diplomacy
- Ocean Law and Policy
- Straits of Malacca and other sealanes vital to Malaysia's interests.

Among the achievements of MIMA since its establishment are:

- facilitating the signing of the Prevention of Incidents at Sea (INCSEA) Agreement between the Malaysian and Indonesian navies;
- providing research support that led to the establishment of the Malaysian Maritime Enforcement Agency;
- organising a series of international conferences on the Straits of Malacca and South China Sea;
- publishing Malaysia's first ever Maritime Realm Atlas;
- providing policy options for the establishment of an Admiralty Court in Malaysia; and,
- contributing to maritime literature and safeguarding Malaysia's maritime interests

In line with its commitment to building capacity among its staff, MIMA supported the participation of one of its staff members by providing her airfare.

Nippon Foundation – University of British Columbia Nereus Program

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The Nereus Program is a global interdisciplinary initiative between the Nippon Foundation and the University of British Columbia to further knowledge of how best to attain sustainability for the world's oceans. Other partner institutions include the University of Cambridge, Duke University, Princeton University, Stockholm University, United Nations Environmental Programme-World Conservation Monitoring Centre and Utrecht University.

Over-exploitation of the world's fish resources has caused a serious decline in fish populations, and there is widespread concern that the world oceans will be unable to supply fish products for future generations. The NF-UBC Nereus program has been created to help address this global issue by developing an international research network able to evaluate future scenarios for managing fisheries in the world's oceans and communicate and bring about change to how we exploit the oceans in order for our children and grandchildren to enjoy seafood and experience a healthy ocean.

The nine-year research program is built around three core objectives:

- to conduct collaborative ocean research across the natural and social sciences;
- to develop a network of experts that can engage in discussion of complex and multifaceted questions of ocean sustainability; and,
- to transfer these ideas to practical solutions in global policy forums.

The program name was inspired by Homer's *Iliad*, where Nereus is described as the Old Man of the Sea with the ability to foresee imminent changes in the ocean. As the eldest son of Pontos (the Sea) and Gaia (the Earth), Nereus was known for his wisdom, truthfulness, and virtue.

The NF-UBC Nereus program provided the airfare of the Indonesian participant as part of her involvement in a collaborative research project.

Scientific Committee on Oceanic Research

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The Scientific Committee on Oceanic Research (SCOR) is an international, non-governmental, non-profit organisation with a mission to help the global ocean science community advance knowledge of the ocean. Established in 1957 and originally known as the Special Committee on Oceanic Research, SCOR was the first interdisciplinary body to be formed by the International Council for Science.

SCOR covers all areas of ocean science and co-operates with other organisations with common interests. Its activities focus on promoting international cooperation in planning and conducting large-scale ocean research projects studying complex natural phenomena, and it provides a mechanism to bring together international scientists for this purpose. Scientists from 32 nations participate in its working groups and steering committees, with approximately 250 involved in SCOR activities on a voluntary basis at any given time.

Capacity building is a key activity and dates back to the very beginning of the organisation. The focus has primarily been on helping individual scientists from developing countries to be involved in SCOR activities and to network with scientists from developed countries. To facilitate these activities, the SCOR Committee on Capacity Building works to:

- provide direction for SCOR's capacity-building activities: participation of scientists from developing countries and countries with economies in transition in SCOR activities (e.g., guidelines for WG proposals), the POGO-SCOR Fellowship Program, travel grants (e.g., guidelines for grants), the SCOR Visiting Scholars Program, and provision of reports to libraries in developing countries;
- guide and assist SCOR Executive Director in development of new capacity-building activities, particularly the Regional Graduate Networks of Oceanography activity;
- assist SCOR-sponsored projects and working groups in developing and implementing their capacity-building activities;
- help SCOR arrange funding for existing and new capacity-building activities; and,
- assist SCOR in interacting with regional and international groups related to capacity building in ocean sciences, such as the ICSU regional centers, START, IOC regional programs, etc.

Through the Committee on Capacity Building, SCOR approved a grant which helped cover living expenses and ground transportation for the participants from Indonesia and Malaysia.

State Oceanic Administration

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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.

Within the SOA 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. Its main functions include:

- the supervision and management of sea area use, marine environment protection, marine disaster forecasting and mitigation;
- ensuring 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.

SOA provided four scholarships to cover tuition and full expenses in Halifax. Together with the IOI-China travel grants, this funding enabled four SOA staff members to attend the 2015 course from their Publicity and Education Centre, Comprehensive Office, National Ocean Technology Centre and the China Coast Guard.

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

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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.

OSRF provided general training funds for the 2015 training programme, which enabled full tuition and living expenses to be covered for the participants from the Bahamas and Guyana, and partial expenses to be covered through “top-up funding” for those from Indonesia and Malaysia. In addition, OSRF provided funding through the Danielle de St Jorre Scholarship (DDSJS).

Established by the IOI in 1999, the DDSJS honours 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, small island developing states (SIDS), and the world at large. With a value of Swiss Francs 10,000, this annual scholarship is open to women from SIDS who wish to attend a training programmes or university degree programme 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 2015 recipient, the first to be chosen from Antigua and Barbuda, used the award to participate in the IOI-Canada training programme. Top-up funding to cover her remaining expenses was provided from general OSRF training support.

Western Indian Ocean Marine Science Association

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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 Kenya to cover his airfare.

World Wildlife Fund – US

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Founded in 1961, World Wildlife Fund (WWF) has been protecting the future of nature for over 50 years. The world's leading conservation organization works in 100 countries and is supported by 1.1 million members in the United States and nearly 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. Its mission is to conserve nature and reduce the most pressing threats to the diversity of life on Earth.

In recognition of the fact that effective policy, education, fieldwork, and other conservation initiatives depend on sound technical knowledge and skills, 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, and former chairman of the board, 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 the capacity of individuals and institutions, EFN provides proven and potential leaders with financial support to pursue degrees, attend short-term training, and conduct local conservation workshops. These initiatives provide conservationists with the skills they need 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 Indonesia and Malaysia in the form of two Professional Development Grants towards their course 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 invaluable donation of time and expertise. Their contribution to the success of the training programme is gratefully acknowledged.



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