Canada-Europe Working Session on Oceans

Nov. 4-6, 2015

Barcelona

Location: Institute of Marine Science
Passeig Marítim de la Barceloneta, 37-49
08003 Barcelona, Spain
On behalf of Institute of Marine Science (ICM) of the Spanish National Research Council (CSIC), Ocean Networks Canada (ONC), the Embassy of Canada to Spain and the Spanish Institute of Oceanography (IEO), with the collaboration of the European Commission and the Canada Foundation for Innovation, we are delighted to invite you to actively participate in a working session on

HORIZON 2020
MARINE AND ATLANTIC ACTION PLAN:
OCEAN COOPERATION BETWEEN EUROPE AND CANADA
RELATED TO OCEAN OBSERVATORY
SCIENCE, TECHNOLOGY AND INNOVATION.

The Atlantic Ocean influence is not confined to Europe. It is a shared global resource and unified system that influences global climate and Earth’s dynamics. Countries have a common interest and responsibility for ensuring good ocean governance that is reflected in the International Seabed Authority.

The economic value of the Atlantic Ocean is enormous for the countries located on its shores. The European Commission believes that over time, the Atlantic Ocean Action Plan could create a solid foundation for cooperation with other Atlantic nations, including joint work in oceanographic research and observation. There is currently an intention of engagement from the U.S., Canada and the EU to establish a transatlantic research alliance, to deepen our common understanding of the Atlantic ecosystem and its potential to support the blue economy.

Canada joined forces with EU and U.S. partners in May 2013 through the Galway Declaration and agreed to create the Transatlantic Marine Research Alliance.

As a result of the Alliance, Canadian researchers have priority access to key parts of Horizon 2020, EUREKA, and Ocean Atlantic Action Plan.

The EU, Canada and the U.S. lead the world in the development of ocean observatory technologies and ocean observatory science. This working session will bring together Canadian and European organizations interested in collaborative research and technological development in the ocean observatory sector. We aim to form working groups in areas of mutual interest, that could respond to future H2020 Marine and Atlantic funding opportunities.

We would like to establish working groups in advance of the session in Barcelona to begin identifying and prioritizing different opportunities.
Organizers:

Institute of Marine Sciences (ICM) of the Spanish National Research Council (CSIC):
Dr. Albert Palanques, Director: albertp@icm.csic.es
Dr. Jacopo Aguzzi: jaguzzi@icm.csic.es

Ocean Networks Canada (ONC):
Dr. Kim Juniper: kjuniper@uvic.ca
Dr. Tania L. Insua: tinsua@uvic.ca

Canadian Trade Commissioner Service, Embassy of Canada to Spain:
Isidro Garcia: isidro.garcia@international.gc.ca

Sponsors:
The Canada Foundation for Innovation www.innovation.ca
Spanish Institute of Oceanography www.ieo.es
Ocean Networks Canada www.oceannetworks.ca
Institute of Marine Sciences www.icm.csic.es
Trade Commissioner Service, Embassy of Canada to Spain: www.espana.gc.ca

Goals of the working session:

- Define how to move forward for future collaborations.
- Develop Memoranda of Understanding (MOU) to facilitate future science and technology funding proposals.

In order to achieve these goals, communications and information exchange will happen in advance of the working session, so that only details are discussed in November. Working group leaders and detailed agendas have being identified in advance.
PROGRAM

Wednesday, November 4, 2015

20:00-22:00 Networking Reception hosted by the Ambassador of Canada to Spain.

Welcome by:

Ambassador Jon Allen

Gilles Patry, President of the Canada Foundation for Innovation

H10 Art Gallery
C/ Enric Granados 62-64
08008 Barcelona

Thursday, November 5, 2015

Location: Instituto de Ciencias del Mar / Institute of Marine Sciences
Passeig Marítim de la Barceloneta, 37-49
08003 Barcelona, Spain

08:30-09:00 Organizational meeting (only for working group co-chairs)

09:00-09:30 Registration

09:30-09:35 Introduction by Deric Dubien, Senior Trade Commissioner/Embassy of Canada

09:35-10:30 Opening Plenary: Welcome and objectives of this workshop

- Albert Palanques, Director, the Institute of Marine Sciences (ICM-CSIC)
- Jon Allen, Ambassador of Canada to Spain
- Andres Hermida, Secretary General of Fisheries, Spanish Ministry of Agriculture, Food and Environment
- Eduardo Balguerias, Director, Spanish Oceanographic Institute (IEO)

10:30-11:30 Atlantic Action Plan, Horizon 2020 and Eureka

- Matthew King, Head of Unit, C1 Maritime Policy: Atlantic outermost regions and Arctic, DG Mare), European Commission. Presentation on: “Opportunities for Blue Growth in the context of the Atlantic Strategy”
- Marco Weydert, Policy Officer, DG Research & Innovation, F-4 Marine Resources, European Commission. Presentation on: “Actions and opportunities in H2020 to support research and innovation in the Atlantic”
- Federico Cardona, Focal Point for Spain of the Atlantic Strategy at Support team for the Atlantic Action Plan
- Juana Sánchez, EUREKA Project Coordinator, Department of Foreign Technology Action/International Programmes Directorate; Spanish Centre for the Development of Industrial Technology (CDTI)

11:30-12:00 Networking Break
12:00-13:20 Financial Instruments, Different Actors in the H-2020, Atlantic Ocean Action Plan and European Structural and Investment Funds

Speakers are to introduce themselves and their organizations.

- Gilles Patry, President & David Moorman, Senior Program Planning Officer, Canada Foundation for Innovation
- Marco Weydert, Policy Officer, DG Research & Innovation, F-4 Marine Resources, European Commission
- Marta Conde Vidal, National Contact Point for Horizon 2020 (CDTI)
- Anne Christine Brusendorff, Secretary General, International Council for the Exploration of the Sea (ICES)
- Antonio García-Gómez, Programme Manager - EU policies - Senior Specialist for matrix interaction "Smart Growth" in DG Regional and Urban Policies of the European Commission, dealing with the implementation of EU programs in the field of research and innovation.

Panel on Innovative Financing Mechanisms to Support Observatory Science and Technology.

The sustainability of the observation systems and the development of new technologies are crucial to achieve global initiatives such as the European Marine Observation and Data Network (EMODNET).

13:20-13:40 Questions to the panel:

a) What would be required to have specific calls within the next HORIZON 2020 for support of observatory monitoring in existing observatories and expansion? These calls could have ecological or technological objectives as well as operational monitoring and forecasting.

b) How can we use existing funding for supporting PhD students and Postdoctoral Fellows in observatory science and technology? Examples of the S&T to be developed would include: new data products, big data tools, operational oceanography, hardware and software. One avenue for this would be to promote collaboration between SMEs from the marine technology and research sectors.

c) What is the feasibility of having an EU-Canada advisory committee related to ocean observatories that would support initiatives such as the Atlantic Action Plan?

13:40-13:50 Review of working group goals by the Steering Committee coordinators (Juniper, Aguzzi and Garcia)

13:40-15:00 Networking Luncheon

15:00-17:30 Parallel Sessions/Working Groups (#1-3):

Scientific and Technological Collaborations: Best Practices
**Working Group # 1: Real time and long-term observations in submarine canyons’ research**

Main Topics: Critical scientific questions requiring observatory approach and collaborations for submarine canyons research including INCISE 2016

**Co-Chairs:** Fabio de Leo (Ocean Networks Canada)  
Pere Puig (ICM-CSIC)  
Laurenz Thomsen (Jacobs Univ.-ROBEX)

**Team:**
- Begoña Perez, Puertos del Estado.
- Nadine Lebris, Banyuls Marine Station
- Anna Sanchez-Vidal, Marine Biogeochemist at University of Barcelona
- Emanuela Fanelli, Marine Environment Research Centre (ENEA).
- Henrique Cabral, Marine and Environmental Sciences Centre/MARE
- Ian Wright, National Oceanography Centre/U. of Southampton
- Joao Vitorino, Instituto Hidrográfico/Portugal
- Pedro Fernandez, Channels & Ports Department/Polytechnic University of Madrid;
- Joao Tasso, Head of the Underwater Systems and Technology Laboratory, Porto University.
- Albert Palanques, Director of the Institute of Marine Sciences
- Joao Vitorino: Oceanography Division, Instituto Hidrográfico, Lisbon
- Joan Baptista Company, Renewable Marine Resources Department, ICM/CSIC

**Working Group # 2: Detection and forecasting of tsunamis and storm surge using ocean observatory data - automatic systems and operative real-time systems**

Main Topics: Tsunami forecast, storm surge forecasting

**Co-Chairs:** Joaquin Tintore (SOCIB)  
Tania L. Insua (Ocean Networks Canada)  
Paolo Favali (INGV, EMSO Manager)

**Team:**
- Begoña Perez, Puertos del Estado
- Fidel Echevarria, International Marine Campus of Excellence CEIMAR
- Miquel Canals; University of Barcelona
- Amaya Vega, Research Fellow, SEMRU – NUI Galway
- Marcello G. Magaldi, Istituto de Scienze Marine (ISMAR)
- Ian Wright, National Oceanography Centre/U. of Southampton
- Ramiro Neves, Marine Environment and Technology Center /MARETEC
- Michael Gillooly, Director Ocean Science and Information Service/Marine Institute, Ireland
- Chris Barnes, Chair ITU/WMO/UNESCO IOC’S JOINT Task Force on Smart Subsea Cable Systems
- Jorge Macias, Mathematic Analysis Dept. of Malaga University
- Cesar Rodriguez; ICREA Research Professor at Institute of Marine Sciences
- Marie Vander Heiden, Executive Director, Association of Professional Biology
- Hamid Mostaghaci, S&T Senior Business Advisor, DFATD
Working Group #3: Innovative financing mechanism to support marine research scientific infrastructure

Main Topics: The sustainability of observation systems is crucial to achieve global initiatives such as the European Marine Observation and Data Network (EMODNET). Several initiatives have been worked out to improve the international cooperation and the management of the European fleets of research vessels (EUROFLEETS), gliders (GROOM), profilers (EUROARGO), etc. However, there is room for improvement in the management of large infrastructures (marine test-sites, tanks, etc.) and collaborative actions.

Co-Chairs: Gilles Patry (CFI)
           Martha Crago (Dalhousie)
           Joaquin Hernandez-Brito (PLOCAN)
           John Breslin (SMARTBAY Ireland)

Team:

- Ralf Bachmayer/Engineering and Applied Science, Memorial University
- Antonio García-Gómez, Programme Manager Officer - EU policies
- Belen Nuñez-Lagos, Sub-directorate for EU, Ministry of External Affairs
- Begoña Perez, Puertos del Estado
- Karen Fraser, OCEANERA-NET Project Manager
- Joaquin del Río Fernandez, Obsea Cabled Observatory
- Silvia Torres, Marine Technology Unit Coordinator/CETMAR
- Eric Delory, Engineering, Applied Sciences/PLOCAN
- Margaret Rae, Programme Manager/AORAC-SA
- Amaya Vega, Research Fellow, SEMRU – NUI Galway
- Kim Juniper, Chief Scientist, Ocean Networks Canada
- Luisa Bastos, CIIMAR
- Patrick Farcy, Coordinateur JERICO, Direction Scientifique (PDG-DS)/IFREMER
- Ligia Pinto, Environmental Engineering, University of Lisbon
- Antonio Jorge da Silva/Instituto Hidrográfico/Portugal
- Maribeth S. Murray, Arctic Institute of North America
- Maria Joao Ramos, Vice-rector, University of Porto
- Bill Carter, Centre for Applied Ocean Technology, Fisheries & Marine Institute of Memorial University
- Manuel Barangue, Deputy Chief Executive and Director of Science of Plymouth Marine Institute
- Katherine Angell-Hansen, Director of JPI Oceans
- Arran McPherson, DG Ecosystem, Fisheries and Oceans Canada
- Federico Cardona, Support Team for the EU Atlantic Action Plan
- Michael Gillooly, Director Ocean Science and Information Service/Marine Institute, Ireland
- Ricardo Serrão, MEP, Member of the Inter-parliamentary, Delegation EU-Canada
- Oliver Wragg, Commercial Director of the European Marine Energy Centre
- Ian Wright, Director, Science and Technology, National Oceanography Centre, University of Southampton Waterfront Campus
- Christine Brusendorff, Secretary General, ICES
- Esther Villoria, Environment & Consents Manager/Repsol New Energies
- Fiona Grant, International Programmes, Marine Institute, Ireland
- Pierre-Marie Sarradin, Head of the Deep-sea Ecosystem study/IFREMER
- Rosa Chapela, Head of Fisheries Socio-economic Department/CETMAR
**Friday, November 6, 2015**

**09:00-09:30**  Organizational meeting (only for working group co-chairs)

**09:30-10:30**  Plenary session
   - Presentations from working groups #1, #2 and #3 (15 min each)
   - Open discussion
   - Review of working groups' objectives for working groups #4-7

**10:30-11:00**  Networking Break

**11:00-13:30**  Parallel Sessions: Operational Oceanography
   - Working Groups (# 4-7) and Networking Break

**Working Group #4: Maritime Domain Awareness: ocean-observing technology for operational monitoring and forecasting to support security and safe maritime traffic**

Main Topics: Acoustic, Integration and automation of technology for operational oceanography, sea state modeling, water quality monitoring (hypoxia and Harmful Algal Blooms)

**Co-Chairs:** Edel O’Connor, Marine Institute of Ireland
   - Julen Maden, AZTI Tecnalia

**Team:**

- Rogerio Chumbinho; SmartBay
- Joaquin del Rio Fernandez, Obsea Cabled Observatory
- Christoph Waldmann, CMOVE/MARUN
- Silvia Torres, Marine Technology Unit Coordinator/CETMAR
- Luisa Bastos, CIIMAR
- Chris Barnes, Chair ITU/WMO/UNESCO IOC’S JOINT Task Force on Smart Subsea Cable Systems
- Ramiro Neves, Marine Environment and Technology Center/MARETEC
- Antonio Jorge da Silva/Instituto Hidrográfico/Portugal
- Bill Carter, Centre for Applied Ocean Technology, Fisheries & Marine Institute of Memorial University
- Joao Tasso, Head of the Underwater Systems and Technology Laboratory, Porto University
- Jorge Macias, Mathematical Analysis Dept. of Malaga University
- Patrick Farcy, Coordinateur JERICO, Direction Scientifique (PDG-DS)/IFREMER
- Maria Joao Ramos, Vice-rector, University of Porto
- Antonina dos Santos Head of Departamento do Mar e Recursos Marinhos, Instituto Português do Mar e da Atmosfera
- Joao Vitorino; Oceanography Division, Instituto Hidrográfico, Lisbon
- Tania L. Insua, Ocean Networks Canada
**Working Group #5: Integrated Arctic marine observing systems**

Main Topics: Integrated Arctic Observing System and Climate impacts on Arctic marine ecosystems, resources, new economic activities.

Co-Chairs:  
Kim Juniper, Ocean Networks Canada  
Louis Fortier, ArcticNet  
Antonio Quesada, MINECO & University Autonomous of Madrid

Team:
- Miquel Canals; University of Barcelona
- Marcello G. Magaldi, Instituto de Scienze Marine (ISMAR)
- Ian Wright, National Oceanography Centre/U. of Southampton
- Maribeth S. Murray, Arctic Institute of North America
- Luis Somoza, Geological Survey of Spain/IGME
- Christine Brusendorff, Secretary General, ICES
- Joao Tasso, Head of the Underwater Systems and Technology Laboratory, Porto University
- Kathrine Angell-Hansen, Director of JPI Oceans
- Manuel Barangue, Deputy Chief Executive and Director of Science of Plymouth Marine Institute.
- Cesar Rodriguez; ICREA Research Professor at Institute of Marine Sciences
- Arran McPherson, DG Ecosystem, Fisheries and Oceans Canada

**Working Group #6: Ocean observing programs and technologies to support ocean health monitoring and related decision-making**

Main Topics: legacy and emerging soluble contaminants, micro and nano-particle contaminants, conservation of threatened and endangered marine species, management of commercially important fish and shellfish stocks, regional evaluations of ocean change

Co-Chairs:  
Elena Guijarro, Spanish Oceanographic Institute  
Peter Ross, Ocean Pollution Research Program/Vancouver Aquarium)  
Sara Iverson (Ocean Tracking Network)  
Margaret Rae, Manager/AORAC-SA

Team:
- Fabio de Leo (Ocean Networks Canada)
- Ralf Bachmayer/Engineering and Applied Science
- Fidel Echevarria, International Marine Campus of Excellence CEIMAR
- Anna Sanchez-Vidal, Marine Biogeochemist at University of Barcelona
- Jesus Gago, researcher in Spanish Oceanographic Institute
- Carmen Morales, Vancouver Aquarium Marine Science Centre
- Arran McPherson, DG Ecosystem, Fisheries and Oceans Canada
- Christine Brusendorff, Secretary General, ICES
- Luisa Bastos, CIIMAR
- Ricardo Serrão, MEP, Member of the Inter-parliamentary, Delegation EU-Canada
- Manuel Barangue, Deputy Chief Executive and Director of Science of Plymouth Marine Institute
- Martí Nadal, Researcher at the Laboratory of Toxicology and Environmental Health at Universitat Rovira i Virgili (URV)
- Pierre-Marie Sarradin, Head of the Deep-sea Ecosystem study/IFREMER
- Henrique Cabral, Marine and Environmental Sciences Centre/MARE
Working Group # 7: An integrated approach to the development of synergies between ocean observatories and marine renewable energy sector

Main Topics: low-cost opportunities for add-on ocean sensor platforms, real-time ocean and atmospheric data to monitor energy conversion efficiency, renewable energy technologies for ocean instrumentation

Co-Chairs: Karen Fraser, Marine Energy Senior Executive; OCEANERA-NET Project Manager  
Nicolas Wallet, Policy and Project Manager, Ocean Energy Europe  
John Breslin, Managing Director of SMARTBAY Ireland

Team:

- Christoph Waldmann, CMOVE/MARUM  
  Eric Deleroy, Engineering, Applied Sciences/PLOCAN  
- Pedro Fernandez, Channels & Ports Department/Polytechnic University of Madrid  
- Joao Tasso, Head of the Underwater Systems and Technology Laboratory, Porto University  
- Oliver Wragg, Commercial Director, the European Marine Energy Centre (EMEC)  
- Ligia Pinto, Environmental Engineering, University of Lisbon  
- José Paulo Pinto, Instituto Hidrografico/Portugal  
- Michael Gillooly, Director Ocean Science and Information Service/Marine Institute, Ireland  
- Manuel Baranguet, Deputy Chief Executive and Director of Science of Plymouth Marine Institute  
- Marie Vander Heiden, Executive Director, Association of Professional Biology  
- Oliver Wragg, Commercial Director of the European Marine Energy Centre  
- Esther Villoria, Environment & Consents Manager/Repsol New Energies  
- Federico Cardona, Support Team for the EU Atlantic Action Plan  
- Fiona Grant, International Programmes, Marine Institute, Ireland  
- Joannès Berque/Marine Energy Area/TECNALIA

13:30-15:00 Networking Luncheon

15:00-17:00 Final Plenary Session

Chair: Martha Crago

Presentations from working groups #4, #5, #6 and #7 (15 min each)  
Workshop report (15 min)*  
Plenary wide discussion (45 min)

17:00-17:30 Closing Session: Conclusions

- Déric Dubien, Senior Trade Commissioner, Embassy of Canada  
- Matthew King / European Commission  
- Marco Weydert / European Commission

* It is of pivotal importance to hold a discussion on delivering a document as an action plan on strategic priorities. The document should include: a list of key ocean observing science and technology priorities in relation to future calls for proposals; specific topics and working groups for future collaborations should be identified; and specific actions for maintenance of these groups should be considered.