

NOTIFICATION TO ICELAND OF PROPOSED RESEARCH CRUISE

**PART A: GENERAL**

1. NAME OF RESEARCH SHIP CCGS Louis S. St-Laurent CRUISE NO. 2016/LSSL
  
2. DATES OF CRUISE From 29 July 2016 To 31 July 2016  

Note: These dates reflect entry and exit from the Icelandic 200 nautical mile zone.
  
3. OPERATING AUTHORITY: Canadian Coast Guard, Government of Canada  
TELEPHONE: 011-8816-514-22642 (Iridium)  
TELEFAX: 011-8816-937-22621 (Iridium)  
TELEX: nil
  
4. OWNER (if different from no. 3)
  
5. PARTICULARS OF SHIP:  
Name: CCGS Louis S. St-Laurent  
Nationality: Canadian  
Overall length: (in metres) 119.6 m  
Maximum draught: (in metres) 9.9 m  
Net tonnage: 3,403 tonnes  
Propulsion e.g. diesel/steam: diesel-electric  
Call sign: CGBN  
Registration port and number (if registered fishing vessel): not a fishing vessel
  
6. CREW  

Name of master:  
Captain Wayne Duffett

Number of crew: 49
  
7. SCIENTIFIC PERSONNEL  

Name and address of scientist in charge:

Dr. Mary- Lynn Dickson  
Geological Survey of Canada – Atlantic  
Bedford Institute of Oceanography  
1 Challenger Drive (P.O. Box 1006)  
Dartmouth, Nova Scotia B2Y 4A2

Tel/telex/fax no.:  
telephone: +902 426-3448  
fax: +902 407-7470  
email: mary-lynn.dickson@canada.ca

Chief Hydrographer  
Ms. Paola Travaglini  
Canadian Hydrographic Service  
Bedford Institute of Oceanography  
1 Challenger Drive (P.O. Box 1006)  
Dartmouth, Nova Scotia B2Y 4A2

Tel/telex/fax no.:  
telephone: +902 407-7446  
fax: +902 407-7470  
email: paola.travaglini@dfo-mpo.gc.ca

No. of scientists:  
6 during transit to Tromsø

8. GEOGRAPHICAL AREA IN WHICH SHIP WILL OPERATE (with reference to latitude and longitude)

Data will be collected along a line of travel from Halifax, Canada into Tromsø, Norway. Approximate entry to the Icelandic 200 nautical mile limit listed below.

1	60.5533N	025.6692W	Approximate entry point
2	60.9230N	024.6673W	
3	61.2049N	023.3140W	
4	61.2287N	023.0555W	
5	61.3458N	022.1166W	
6	61.5836N	020.3733W	
7	61.6965N	019.7575W	
8	61.8154N	018.7402W	
9	62.0326N	017.1071W	
10	62.0925N	016.5871W	
11	62.1779N	015.3327W	
12	62.2226N	014.4249W	
13	62.3140N	013.4578W	
14	62.8889N	011.6170W	
15	62.8990N	011.5843W	Approximate exit point

See graphic in Annex

9. BRIEF DESCRIPTION OF PURPOSE OF CRUISE

Canada is conducting a survey in the vicinity of the Lomonosov Ridge and areas northwest of the Canadian Arctic Archipelago to collect data for its continental shelf submission. The survey is being conducted using the CCGS Louis S. St-Laurent and the Swedish icebreaker *Oden*. The CCGS Louis S. St-Laurent will be calling at the port of Tromsø, Norway en route to the continental shelf survey area for the purpose of refuelling, re-provisioning, changing crew and boarding the science team. It will meet the *Oden* at the ice edge in Fram Strait and the two vessels will transit to the survey area together. The opportunity has arisen to take advantage of the CCGS Louis S. St-Laurent's transit from Canada to Tromsø to collect bathymetric data using the multibeam system installed on the ship. This marine scientific research would be conducted in order to increase knowledge of the Atlantic Ocean further to the Galway Statement on Atlantic Ocean Cooperation signed by the EU, Canada and the US on 24 May 2013.

10. DATES AND NAMES OF INTENDED PORTS OF CALL

Not applicable.

11. ANY SPECIAL REQUIREMENTS AT PORTS OF CALL

Not applicable.

NOTIFICATION TO ICELAND OF PROPOSED RESEARCH CRUISE

**1. PART B: DETAILS**

1. NAME OF RESEARCH SHIP CCGS Louis S. St-Laurent CRUISE NO. 2016/LSSL

2. DATES OF CRUISE From 29 July 2016 To 31 July 2016

Note: These dates reflect entry and exit from the Icelandic 200 nautical mile zone.

3. a) PURPOSE OF RESEARCH

To take advantage of the CCGS Louis S. St-Laurent's transit from Canada to Tromsø to collect bathymetric data using the multibeam system installed on the ship. This marine scientific research would be conducted in order to increase knowledge of the Atlantic Ocean further to the Galway Statement on Atlantic Ocean Cooperation signed by the EU, Canada and the US on 24 May 2013.

b) GENERAL OPERATIONAL METHODS (including full description of any fish gear, trawl type, mesh size, etc.)

The multibeam system on the CCGS Louis S. St-Laurent is a Kongsberg EM 122, operating at 12 kHz with up to 288 beams with a beam pattern swath width of four to seven times water depth. The system also includes a 2.5 to 7 kHz swept frequency sub-bottom profiler (Knudsen). Both systems are hull mounted.

4. ATTACH CHART showing (on an appropriate scale) the geographical area of intended work, positions of intended stations, tracks of survey lines, positions of moored/seabed equipment, areas to be fished

See attached.

5. a) TYPES OF SAMPLES REQUIRED (e.g., geological/water/plankton/fish/radionuclide)

Not applicable.

b) METHODS OF OBTAINING SAMPLES (e.g., dredging/coring/drilling/fishing, etc. When using fishing gear, indicate fish stocks being worked, quantity of each species required, and quantity of fish to be retained on board).

Not applicable.

6. DETAILS OF MOORED EQUIPMENT

<u>Dates</u> <u>Laying</u>	<u>Recovery</u>	<u>Description</u>	<u>Depth</u>	<u>Latitude</u>	<u>Longitude</u>
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Not applicable.

7. ANY HAZARDOUS MATERIALS (chemicals/explosives/gases/radioactives, etc.)  
(Use separate sheet if necessary)

Not applicable.

a) Type and trade name

b) Chemical content (and formula)

c) IMO IMDG code (reference and UN no.)

d) Quantity and method of storage on board



c) If explosives give dates of detonation

- Method of detonation
- Position of detonation
- Position of detonation
- Frequency of detonation
- Depth of detonation
- Size of explosive charge in kg.

8. DETAIL AND REFERENCE OF

a) Any relevant previous/future cruises

Not applicable.

b) Any previously published research data relating to the proposed cruise

Not applicable.

9. NAMES AND ADDRESSES OF SCIENTISTS OF THE COASTAL STATE(S) IN WHOSE WATERS THE PROPOSED CRUISE TAKES PLACE WITH WHOM PREVIOUS CONTACT HAS BEEN MADE

It is anticipated that Tatum Herrero, a German national from GEOMAR - Helmholtz Centre for Ocean Research of that country and Elizabeth Weidner, a US national, from the National Oceanographic and Atmospheric Agency of that country will participate in data collection along the line of travel from Halifax to Tromsø, the transit portion of the mission whereby the data is being collected under the Galway Statement on Atlantic Ocean Cooperation signed by the EU, Canada and the US on 24 May 2013. Other scientific and technical personnel on board at this time will be Canadian, both Canadian government employees (Canadian Hydrographic Service) and a participant from Memorial University of Newfoundland.

10. STATE

a) Whether visits to the ship in port by scientists of the coastal state concerned will be acceptable (Yes/No)

Not applicable.

b) Participation of an observer from the coastal state for any part of the cruise together with the dates and the ports for embarkation and disembarkation

Participation onboard of observers from coastal states was not foreseen during collection of bathymetric data along lines of travel. See item 9 regarding participation of scientists/ technical personnel from the EU and US in the collection of data along the line of travel.

c) When research data from the intended cruise are likely to be made available to the coastal state and by what means

Bathymetric data collected during transit in areas within 200 nautical miles of Iceland will be provided to the coastal state within approximately 120 days following the conclusion of the survey.

Canada also intends to submit bathymetric data collected along all lines of travel (Canada to Norway, Norway to the continental shelf survey area, continental shelf survey area to Canada) for inclusion in the General Bathymetric Chart of the Oceans (GEBCO) and/or the International Bathymetric Chart of the Arctic Ocean (IBCAO). Iceland's confirmation that the inclusion of data collected in areas within 200 nautical miles of Iceland in data submitted to GEBCO and/or IBCAO is acceptable would be appreciated as part of the response to this application.

**PART C. SCIENTIFIC EQUIPMENT**

Complete the following table using a separate page for each coastal state

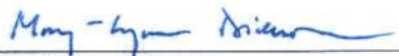
Coastal state: Iceland

Port of call: not applicable

Dates: entry into Icelandic 200 M zone on 29 July 2016, departure on 31 July 2016

Indicate "YES" or "NO"

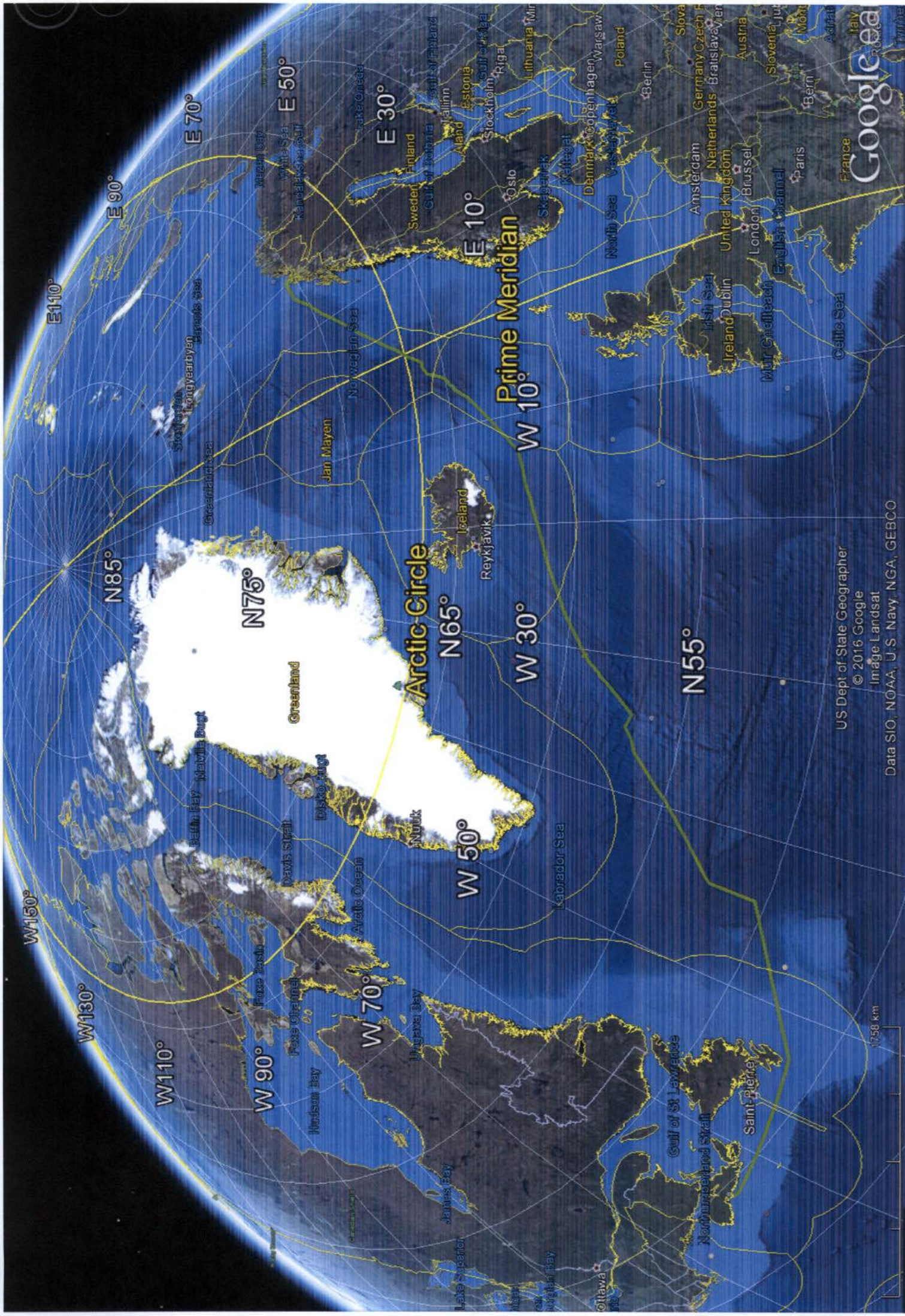
<u>List scientific work by function</u> e.g.	Water column including sediment sampling of the seabed	Fisheries research within fishing limits	Research concerning the natural resources of the continental shelf or its physical characteristics	DISTANCE FROM COAST		
				Within 4 nm	Between 4-12 nm	Between 12-200 nm
Bathymetry	Yes, but no seabed sampling	No	Yes, physical characteristics: depth and morphology	No	No	Yes

  
 Dr. Mary-Lynn Dickson  
 Director, UNCLOS Program  
 Geological Survey of Canada - Atlantic  
 Natural Resources Canada

Dated 21, June 2016

NB IF ANY DETAILS ARE MATERIALLY CHANGED REGARDING DATES/AREA OF OPERATION AFTER THIS FORM HAS BEEN SUBMITTED, THE COASTAL STATE AUTHORITIES MUST BE NOTIFIED IMMEDIATELY





US Dept of State Geographer

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Image Landsat

Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Google

1758 km



# Paola Giovanna Travaglini

Canadian, born May 28, 1964

## *Current Position*

Technical Advisor, Geomatics,  
Canadian Hydrographic Service, Department of Fisheries and Oceans, Ottawa,  
Ontario  
c/o Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, Nova Scotia,  
Canada, B2Y 4A2,  
(902) 407-7446, [Paola.Travaglini@dfo-mpo.gc.ca](mailto:Paola.Travaglini@dfo-mpo.gc.ca)

## *Education*

1990: B.Sc. (Hons) Specializing in Survey Science; Department of Survey Science,  
University of Toronto, Ontario, Canada,

## *Employment Record*

2009- present: Technical Advisor, Geomatics, Canadian Hydrographic Service,  
Ottawa, Ontario  
1999-2006: Acting Hydrographer in Charge, Canadian Hydrographic Service,  
Burlington, Ontario  
1991: Hydrographer, Canadian Hydrographic Service, Burlington, Ontario  
1984 -1990: Field Survey Instrument Person to Party Chief, C.A Sexton Ltd.

## *Hydrographic field projects*

2015: Hydrographer In Charge: CCGS *Louis S. St-Laurent*, Atlantic Crossing  
2014: Hydrographer In Charge: CCGS *Louis S. St-Laurent*, Amundsen Basin,  
2002-2006: A/Hydrographer In Charge: CCGS *Nahidik*, Beaufort Sea Multibeam  
(MB) Survey, Beaufort Sea  
2000-2005: A/Hydrographer In Charge: Fathom Five National Marine Park MB  
Survey, Tobermory, Ontario  
1999-2004: A/Hydrographer In Charge: Sarnia, Cornwall, Welland Canal MB  
Surveys, Ontario  
1998-2001: MB Processor, CCGS *Griffon*, Georgian Bay,  
1998: MB Processor, Thunder Bay & Georgian Bay MB Surveys, Ontario  
1998: MB Processor, CCGS *Griffon*, Hudson Bay  
1997: MB Processor: CCGS *Hudson*, Hudson Bay  
1995-1996: Field Hydrographer: CSS *Hudson*, Hudson Bay

## *Awards and Recognition*

2011: Department of Fisheries and Oceans, Immediate Award  
2009: Department of Fisheries and Oceans, Immediate Award  
2006: Department of Fisheries and Oceans, Immediate Award  
2005: Department of Fisheries and Oceans, Award of Excellence  
2003: Department of Fisheries and Oceans, Immediate Award  
2001: Department of Fisheries and Oceans, Immediate Award  
1993: Department of Fisheries and Oceans, Award of Excellence

**Galway Statement on Atlantic Ocean Cooperation**  
**Launching a European Union - Canada - United States of America**  
**Research Alliance**

The Signatories of this Statement meeting on the occasion of the high level event

*The Atlantic – a Shared Resource, held on*

*23 and 24 May 2013*

*at the Marine Institute, Galway, Ireland*

*Recognizing the importance of the Atlantic Ocean to our citizens, prosperity, human health and well-being, adaptation to climate and other environmental change, and security,*

*Cognizant of our reliance upon the best available science and knowledge to inform decisions affecting the Atlantic Ocean,*

*Realizing that our countries face similar challenges in promoting a healthy and well-understood Atlantic Ocean,*

*Acknowledging the critical interlink between the Atlantic Ocean and the portion of the Arctic region that borders the Atlantic,*

*Appreciating the value of our ongoing cooperation on ocean science and observation in the Atlantic Ocean, and*

*Valuing the essential role of international partnership to achieve our shared objectives and the potential of greater cooperation to advance our knowledge of the Atlantic Ocean,*

Intend to advance our shared vision of an Atlantic Ocean that is healthy, resilient, safe, productive, understood and treasured so as to promote the well-being, prosperity, and security of present and future generations.

This cooperation is intended to increase our knowledge of the Atlantic Ocean and its dynamic systems - including interlinks with the portion of the Arctic region that borders the Atlantic - by aligning our ocean observation efforts to improve ocean health and stewardship and promote the sustainable management of its resources. Observation is fundamental to understanding the ocean and forecasting its future. Activities may include efforts to better coordinate data sharing, interoperability and coordination of observing infrastructures and seabed and benthic habitat mapping.

This cooperation may result in mutual benefits including better ecosystem assessments and forecasts and deeper understanding of vulnerabilities and risk, including those relating to the global climate system and climate change impacts. It can also help to generate new tools to increase resilience, conserve rich biodiversity, manage risk and determine social, environmental and economic priorities.

We further intend to promote our citizens' understanding of the value of the Atlantic by promoting oceans literacy. We intend to show how results of ocean science and observation address pressing issues facing our citizens, the environment and the world and to foster public understanding of the value of the Atlantic Ocean.



We intend to advance this agenda by

- taking stock of and utilizing existing bilateral science and technology cooperation (e.g. the U.S. - European Union Science and Technology Joint Consultative Group and the Canada - European Union Science and Technology Joint Coordinating Committee) and multilateral cooperation frameworks including those related to ocean observation, and ocean literacy initiatives;
- recommending priorities for future cooperation and, where possible,
- coordinating the planning and programming of relevant activities in these areas, including promoting researcher mobility.

This cooperation could potentially involve national partners and European Commission representatives, the private sector, and the scientific community to further our efforts by harnessing the value of public-private partnerships.

This initiative is also expected to reinforce existing international efforts to advance our knowledge of the ocean, including the World Ocean Assessment.

Signed in Galway on 24 May 2013 in three originals in the English language.

**For the European Union**

**For the Government of  
Canada**

**For the Government of the  
United States of America**



**Máire GEOGHEGAN-  
QUINN**  
Commissioner for Research,  
Innovation and Science

**Edward FAST**  
Minister of International  
Trade and Minister for the  
Asia-Pacific Gateway



**Dr Kerri-Ann JONES**  
Assistant Secretary of State  
for Oceans and International  
Environmental and Scientific  
Affairs



**Maria DAMANAKI**  
Commissioner for Maritime  
Affairs and Fisheries