The Postgraduate Certificate in Ocean Bathymetry

Designed to train a new generation of scientists and hydrographers in ocean bathymetry

is funded by:

The Nippon Foundation of Japan

www.nippon-foundation.or.jp/en/

and taught at:

The **Center for Coastal and Ocean Mapping / Joint Hydrographic Center; University of New Hampshire, USA**

Dr Rochelle Wigley
Director of training program

PCOB course material and structure

Fall Semester
(August-December)

- Fundamentals of Ocean Mapping I
- Applied Tools in Ocean Mapping
- Geological Oceanography
- Elective (Math for Mapping etc.)

J-term

- Visit NGDC in Boulder, Co.
- Software training (e.g. Fledermaus & QinSy)

Spring Semester
(January-May)

- Fundamentals of Ocean Mapping II
- Bathymetric Spatial Analysis
- Geodesy and Positioning for Ocean Mapping
- Seamanship and Marine Weather
- Electives (LOS, Coastal Processes etc.)

Summer
(June-August)

- Students take the Hydrographic Field Course

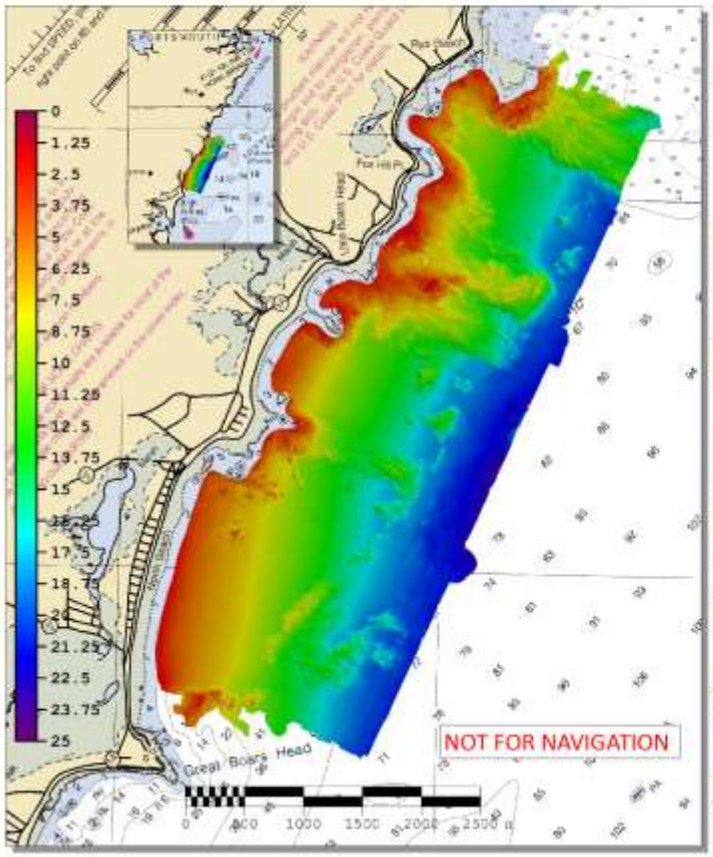
Lab Visit & Cruise

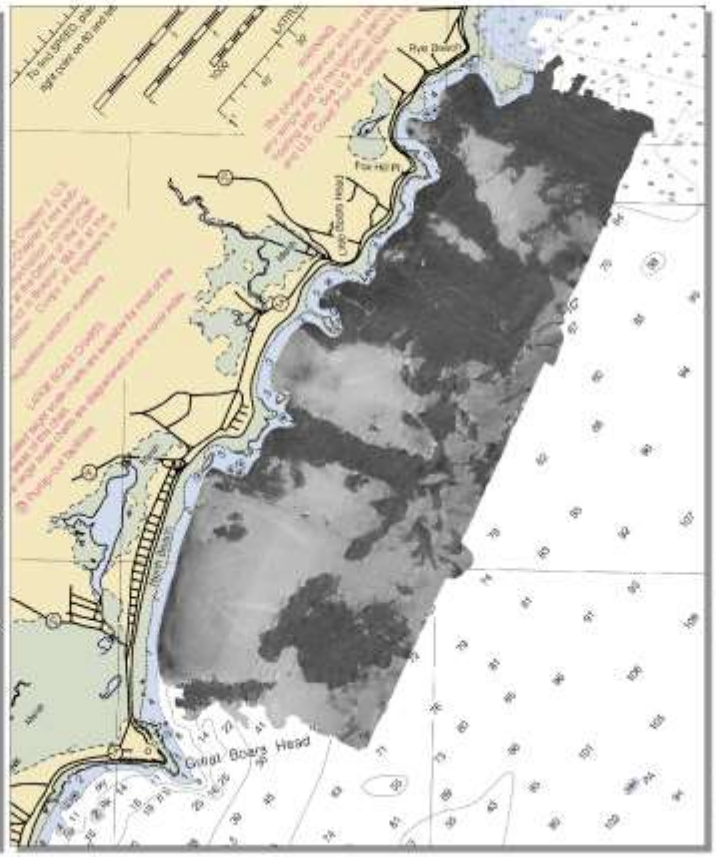
- The working visit to a research organization and / or a cruise over the summer is selected by student and their home organization in a field of mutual interest.
- The visit aims to round out the students training, to help them build networks and to deepen some of their newly-acquired theoretical knowledge. This training includes familiarization with the programs the visited organization is engaged in, as well as some directed work under supervision.

CCOM-JHC Summer Hydro 2015

Faculty/Vessel Personnel: A. Armstrong (USA), S. Dijkstra (The Netherlands), B. Smith (USA), E. Terry (USA), D. Tourrielle(USA)

Survey Team: M. Di Stefano (Italy), O. Irish (USA), J. Kidd (USA), A. Kimeli (Kenya) , Y. Kumari (Sri Lanka), H. Kurita (Japan), D. Manda (USA), A. Pecanha (Brazil), I. Prasetyawan (Indonesia), J. Reperez (Philippines), M. Vallee-Anzieni (Venezuela)





This final comprehensive, intensive and practical course puts to use the wide-ranging academic knowledge gained during the training program – with students gain experience in all aspects of hydrographic surveying: from planning, acquisition and processing, to product generation.

Student Networking Visits

January: NGDC, Boulder, CO

July: 1st Chart Adequacy Workshop NOAA HQ, Silver Spring, MD

Article

First NOAA Chart Adequacy Workshop - 27/08/2015

Dr. Shachak Pe'eri, LT Anthony Klemm and Dr. Rochelle Wigley, USA

The key objective of the NOAA Chart Adequacy Workshop was to demonstrate techniques to evaluate the suitability of nautical chart products using chart quality information and publicly-available information. The three-day workshop was held in Silver Spring, Maryland, USA, from 14 to 16 July 2015. The attendees were cartographers, hydrographers and potential chart producers from hydrographic offices and government agencies around the world. The nations of the participants in the workshop included: Indonesia, Israel, Japan, Kenya, Malaysia, Philippines, South Korea, Sri Lanka, United Kingdom, United States and Venezuela

The workshop began with a general overview of chart adequacy procedures, emphasising that the focus of the workshop was quality management (as opposed to uncertainty management where risk is calculated based on potential consequences by different users and vessels in different marine settings). NOAA's Lt Anthony Klemm stated the three main goals of the workshop: 1) Train an international group of hydrographers and cartographers; 2) Discuss and review a procedure for assessing chart adequacy based on the depth, main

Lab Visits 2015

- **Marine Chart Division – NOAA**
  - Satellite-image Derived Bathymetry (students used local data)
- **CCOM / JHC**
  - Ocean Exploration and Research – Okeanos Explorer
  - Bureau of Ocean Energy Management (BOEM) Project
- **CARIS**
  - Software training In Virginia HO
- **British Oceanographic Data Center**
  - GMT software training
- **SAIHC meeting – Tanzania and HYDRO2015** (upcoming at end-November)

CRUISES:

- R/V Langseth for ECS Survey with CCOM scientists
- R/V Maria S Merian for geohazards survey of Grand Banks Area

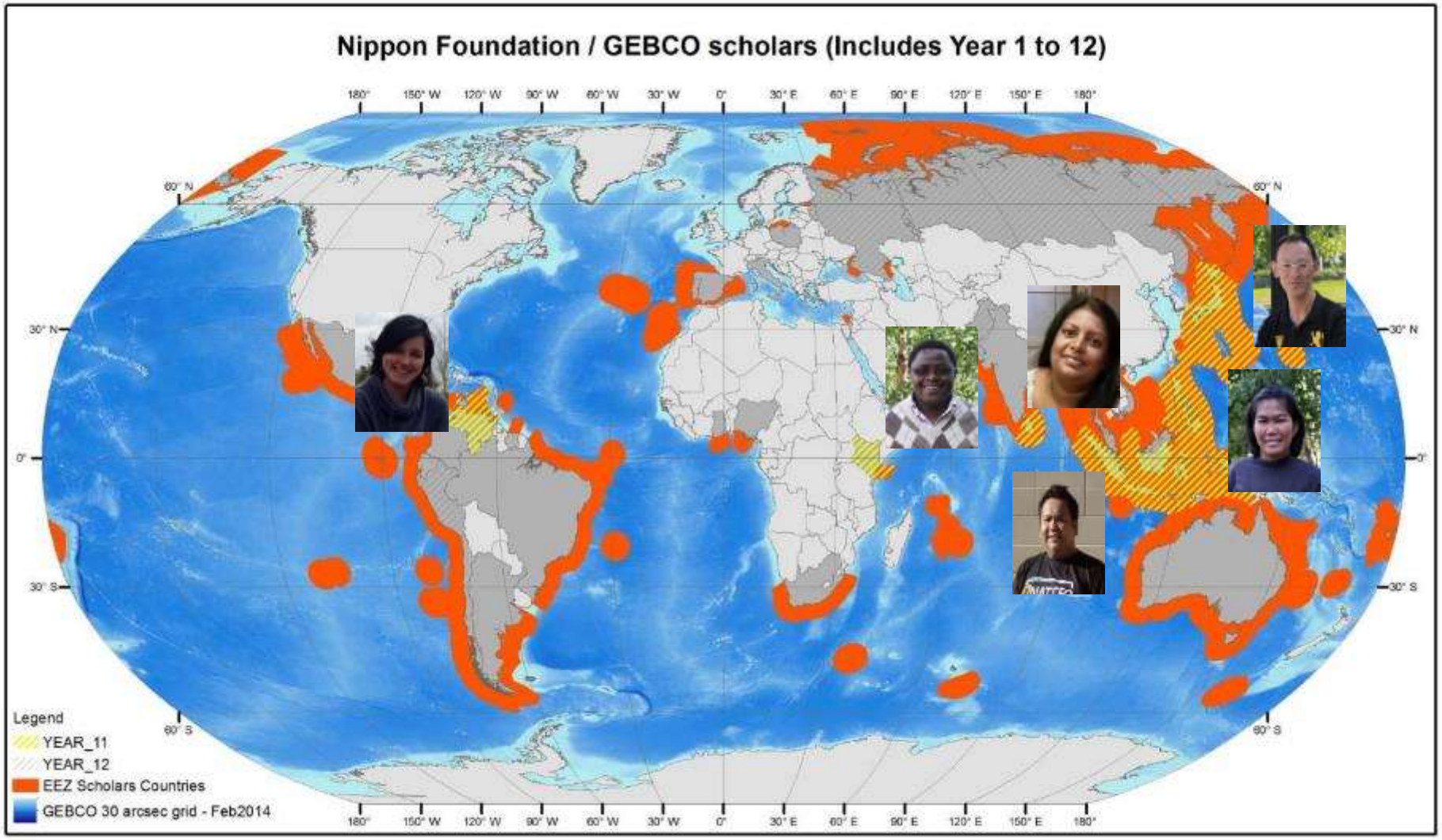
Nippon Foundation / GEBCO Training program

Qualifications attainable:

- GEBCO Postgraduate Certificate in Ocean Bathymetry
- UNH Graduate Certificate in Ocean Mapping
- FIG/IHO/ICA Category A hydrography (theory)



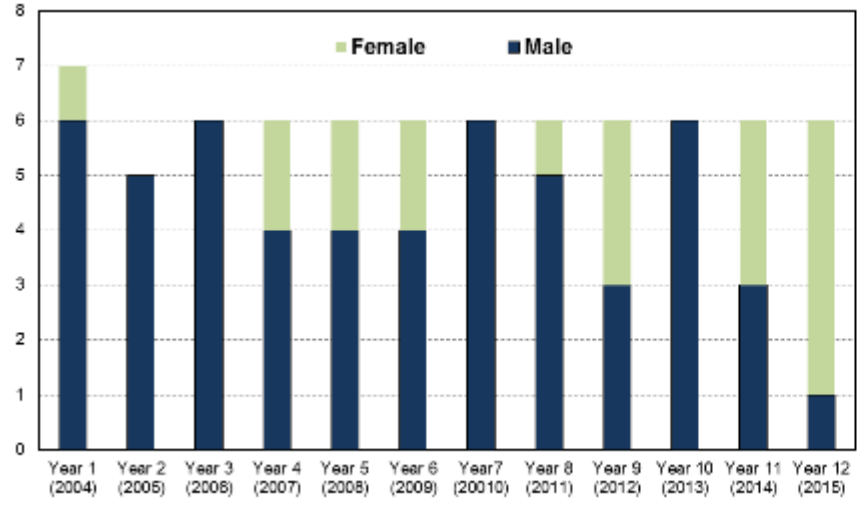

Goodbye to Year 11

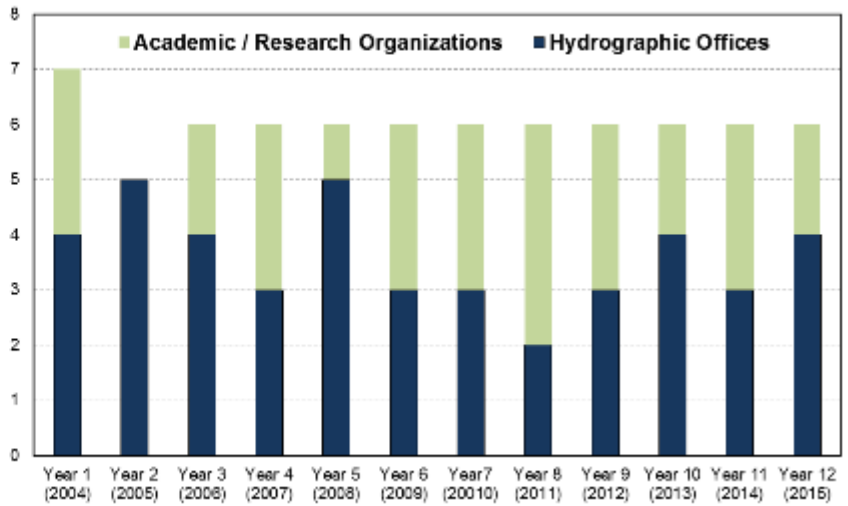


Nippon Foundation/GEBCO Selection Process

The prerequisites is that prospective students must have:

- A passion for the ocean.
- An involvement in the ocean
- A desire to build capacity in their home country
- Applicants aspirations must be supported by their home organization.
- Applicants also have to meet UNH graduate school requirements

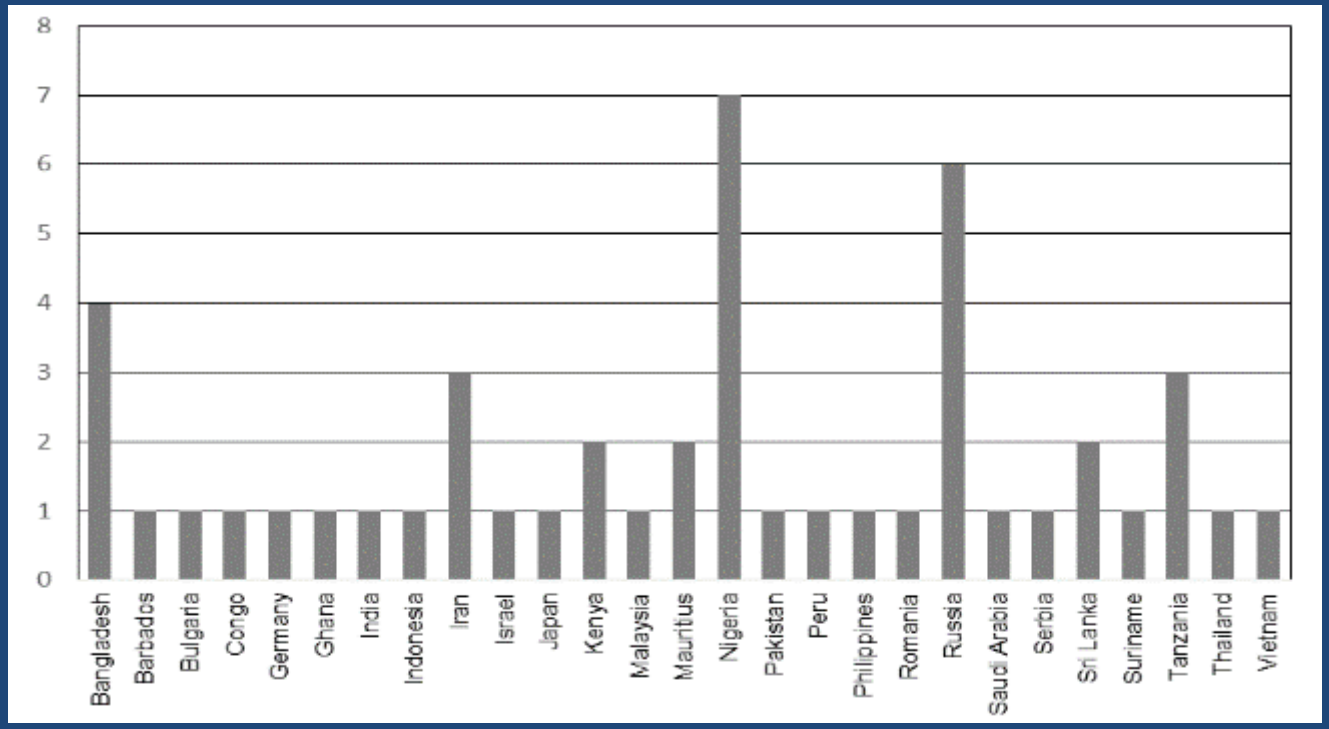




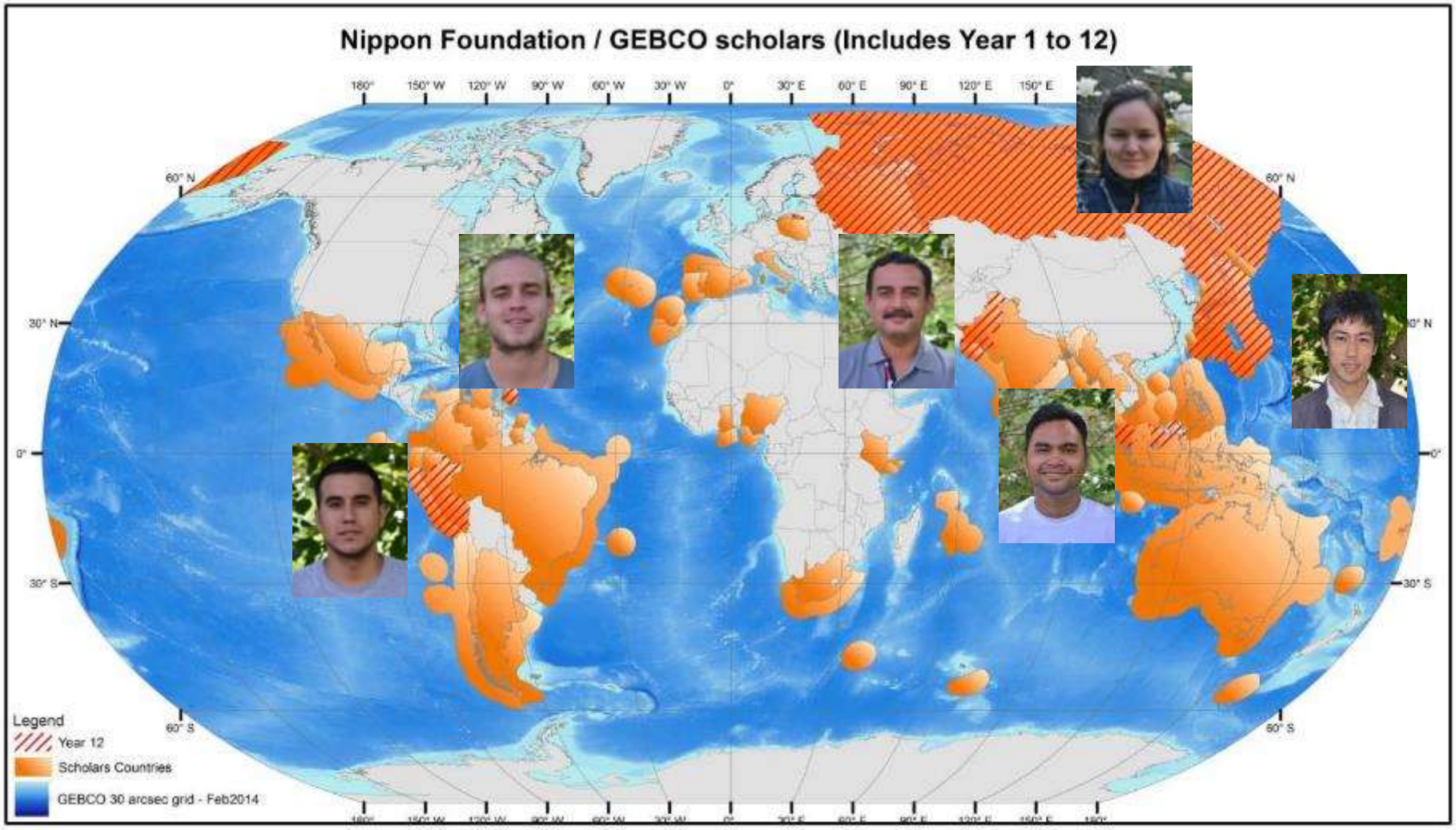
Statistics illustrating the overall trends of alumni

2015/2016:
Year 12 selection

49 candidates from 27 countries
**** 8 (+1) new countries**
**** 14 hydrographers / ** 6 women applications**
INTERVIEW: 18 candidates from 17 countries
SHORTLIST: 9 candidates

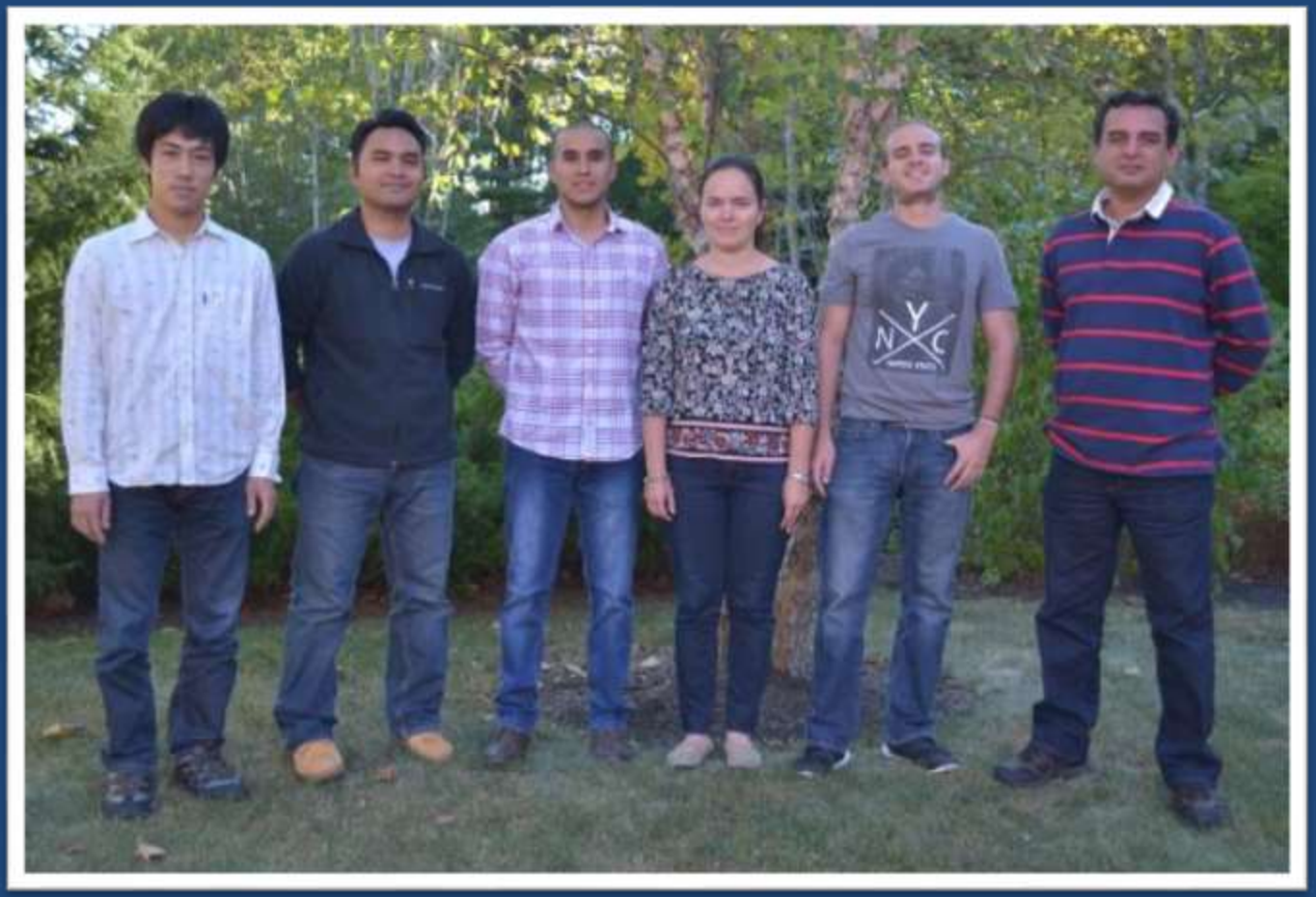


2015/2016:
Year 12 selection



72 Scholars from 33 Coastal states

2015/2016:
Year 12 selection



Dr Chikara Tsuchiya (Japan), Lieutenant Commander Azmi Rosedee (Malaysia), Lieutenant Renzo Menacho (Peru), Dr Evgenia Bazhenova (Russia), Brandon Maingot (Barbados) and Cdr Muhammad Wasim


Thank you