Remote Bathymetric Data Processing By the Alumni of the Nippon Foundation / GEBCO Training Programme





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Background

Nippon Foundation / GEBCO

Training Program

- Takes six (6) trainees per 0 academic year since 2004
- 1 year academic and practical 0 training
- **Opportunities for lab visits and** 0 internships
- Has produced 101 alumni from 0 **43** countries









- CENTER FOR COASTAL AND OCEAN MAPPING

> NOAA/UNH JOINT HYDROGRAPHIC CENTER

GEBCO Subcommittees SCRUM TSCOM

Data Cleaning for the Indian Ocean Bathymetric Compilation c/o Dr Rochelle Wigley

International Meetings and Conferences

IHO IOC AGU



SCOPE

Shell Ocean Discovery XPRIZE Challenge



Unmanned Surface Vehicle (USV)

> Autonomous Underwater Vehicle (AUV)

Mapped seafloor presented using webmap services









X + Y + Z = 100%

Data in GEBCO

Data that are not yet in the

GEBCO compilation

Ocean not yet mapped

Ocean Frontier Mapping

NIWA/ **GNS/LINZ**

- Crowd Sourced Bathymetry
- Technology Innovation

Remote Bathymetric Data Processing



GEBCO 2021 Direct Measurements

NOAA NCEI multibeam data





Logistics

- Two users can log in remotely to the computer and process data simultaneously.
- An online calendar was used to track and schedule who are logged in and working

Advantages

- Opened opportunity to individuals to contribute to the global initiative.
- Gave software access enables volunteers to learn and become proficient in using the software.
- With better planning and a good number of volunteers, it is possible to have 24/7 continuous operation as volunteers are in different time zones.

Challenges

Computer process via remote desktop is slower Time commitment of volunteers

Opportunity for Improvement and Next Steps

- Use hardware with higher computing power.
- Reach out to more interested individuals, build partnership with universities.
- Use of free and open-source software.
- Make online training modules for the project, using actual data for practice that can lead to an online certificate program.



Thank you! Muchas gracias! Obrigada!

