



GEBCO Outreach Working Group

Outreach and Education Activities

Hosted by SHOA
Viña del Mar, Chile
10 – 11 October 2016

Agenda

1. To review outreach activities and discuss near-future plans for outreach (Annex A)
2. To review improvements in outreach website for secondary school students (Annex B)
3. To discuss organization issues in Outreach Working Group
4. To discuss budget allocation plan for 2017-2018 (Annex C)
5. To draft Terms of Reference for GEBCO Outreach Working Group (Annex D)

Annexes:

- A. Details of activities and future initiatives.
- B. Website improvements.
- C. Outreach Work Plan and budget bids.
- D. Draft Outreach Working Group Terms of Reference.

Outreach activities and near-future plans

Submitted by Outreach Working Group

SUMMARY

Executive Summary: It is necessary to discuss future outreach activities and plans with the ideas for the 10 year-roadmap for bathymetric data creation and application for all in all fields. Five aspects about the bathymetric data creation and application for all people in all fields were pointed out as follows: secure funding, increasing GEBCO product usage, increasing GEBCO data input, enhancing GEBCO data creation, promoting general public awareness, and capacity building.

Action to be taken: To review outreach activities and discuss near-future plans for outreach

Related documents: None

1. Ideas for the 10 year-roadmap for bathymetric data creation and application for all in all fields:

Purpose	Target	Channel	Collateral required	Notes	Reference
Secure funding	<ul style="list-style-type: none"> - Bill and Melinda Gates Foundation - IHO - NF, etc. 	Meeting with Grant Manager	<ul style="list-style-type: none"> - Brochure - Power point presentation 	<p>Gates Foundation have a particular interest in assuring food security in developing countries.</p> <ul style="list-style-type: none"> - Better navigation will enable food supply routes. 	
Increasing GEBCO product usage	<ul style="list-style-type: none"> - Marine science community (Research institutes, academic organizations) - Industry - International and national governmental organizations 	<ul style="list-style-type: none"> - Targeted conferences - Targeted project meetings 	Power point presentation	<p>Need to:</p> <ul style="list-style-type: none"> - Identify target conferences - Identify target project meetings 	- GEBCO products and services
Increasing GEBCO data input	<ul style="list-style-type: none"> - Regional hydrographic commission - Crowd-sourced data management - Practical at-sea surveying experts - Governmental organizations - Marine research institutes 	- Email marketing drawing potential data providers to the webpage	<ul style="list-style-type: none"> - Web pages - Source data <ul style="list-style-type: none"> • Single beam and/or multibeam survey data • Individual Soundings • Existing grids 		- Cooperation with IHO Crowd-sourced Bathymetry Working Group (CSBWG)

Purpose	Target	Channel	Collateral required	Notes	Reference
Enhancing derived GEBCO data creation (to maintain global standard and share creative outputs)	<ul style="list-style-type: none"> - Data processing experts - Database managers - Software developers - Ocean Scientists - Geophysicists - Geographers - Geologists 	<ul style="list-style-type: none"> - Open Data Platform for online collaboration - Open Data Platform for sharing data 	<ul style="list-style-type: none"> - Data sets and products - Gridded bathymetric data sets - Digital bathymetric contours - GEBCO Gazetteer of Undersea Feature Names - GEBCO Digital Atlas - GEBCO World Map - IHO-IOC GEBCO Cook Book - Creative outputs beyond diverse fields 	<ul style="list-style-type: none"> - Many experts in all aspects of the field can share derived outputs or meaningful results of researches using GEBCO data sets and products. - Open Data Platform would be a great place to share knowledge about ocean mapping as well as related science. 	
Promoting general public awareness	<ul style="list-style-type: none"> - General public - Students - Educators - Decision-makers 	<ul style="list-style-type: none"> - Web-subpage and app - Link of various education programs - App for Smartphone (e.g. ocean science course app) - Social networking sites (e.g. Facebook) - YouTube materials with explanation note - Exhibitions 	<ul style="list-style-type: none"> - Teaching materials - GEBCO World Map - Smart Globe - Webcomics - Game - Movie file - Virtual Reality service - Lenticular maps of GEBCO World Map, Regional Map, etc. 		<ul style="list-style-type: none"> - Web-subpage for secondary school students - GEBCO products

Purpose	Target	Channel	Collateral required	Notes	Reference
		-Campaigns	-Educational materials -Stories based on bathymetric data and undersea features		
Capacity building	Different levels (Future experts of ocean mapping) <ul style="list-style-type: none"> • Low level • Intermediate • High level 	<ul style="list-style-type: none"> -User training program -Workshop -App for Smartphone (e.g. ocean mapping related course app) - Education programs - Workshops 	<ul style="list-style-type: none"> - Curriculum development - Offline course (e.g. University of New Hampshire) - Online course - Materials about best practices of the usage and application of data for various users 		Various training programs

※ Education and Outreach Working Group Report in October 2015

We discussed and defined the purpose of GEBCO outreach WG as sharing the GEBCO data and promoting awareness of ocean mapping beyond limited stakeholders. Targets for activities of Outreach WG may be wide and different strategies should be considered. To determine the priorities of each target, preliminary AHP analyses were done from questionnaires. Six answers were not enough to justify the priority of target. Collecting ideas of the potential materials and activities were done during the GEBCO break-up meetings. From the historic GEBCO bathymetric charts (1st ed to 5th ed) to Video tapes of Oceanvideolab were discussed. Web-page of high school students were reviewed by eight voluntary members. Different sizes of GEBCO introductory material for conferences were designed and various activities such as reading, playing, printing and marketing were categorized under the page. Google Ocean and ESRI online products were also considered to be important resources. Students from Nippon Foundation may contribute the translation of GEBCO world map in their own languages. Korea may start making small fund to gear up the Outreach WG.

Improvement of Outreach webpages

Submitted by Outreach Working Group

SUMMARY

Executive Summary: It is needed to discuss how to improve outreach webpages for secondary school students. In 2015 subpage proto-types were developed as in Annex B. This student-targeted webpage consisted of several parts: reading materials, playing games, printing world map, designing globes, letters parts, and useful links. Further discussion should focus on the improvement and refining of the subpages.

Action to be taken: To review improvements in outreach website for secondary school students

Related documents: None

1. Education and Outreach Working Group Report in October 2015

Education and Outreach Working Group Report was presented by Hyo Sung and Eunmi Chang. The main thing is to introduce the Educational and Outreach Sub-pages:

- Based on the June 2014 outreach master plan, the subpage for secondary school students was made. The outreach master plans were made in Information Strategy Planning Procedure. Long term and short term plans were allocated with two variables, cost and impact. Physical materials and digital material should be included in the potential activities and materials.
- The subpage for secondary school students has three purposes; awareness of GEBCO activities, leading society toward sustainable ocean development and promote more investments on hydrographic surveying and ocean mapping. Students-targeted web page may not cover all the purposes but may contribute a container to service at the level of student interests. So we suggested storyboard of webpage with sea waves and the bottles of activities such as reading, playing, printing and designing. Letters and Video corners were also designed for sharing the experts' advices and experience. Useful links and job introductions related to ocean mapping were also developed.
- More technical problems to link the subpage to the main page, any guideline for GEBCO homepage should be considered by the BODC experts.
- All the presentation materials above can be found in GEBCO homepages.

IHO-IOC GEBCO Outreach WG Work Plan 2017-2018

1.1 Outreach Tasks

- G Contribute to outreach and education about ocean mapping (IHO Task 3.8.5) by development of outreach and educational materials (IHO Task 3.8.5.1) and printing of IHO-IOC GEBCO World Map (IHO Task 3.8.5.2)
- I Develop short course and course material on compiling digital bathymetric models (DBMs) to be included in GEBCO from a heterogeneous bathymetric source database (IHO Task 3.8.7)

Task	Work item	Priority H-high M-medium L-low	Milestones	Start Date	End Date	Status P-planned O-ongoing C-completed	Contact Person(s) * indicates leader	Related Pubs/Standard	Funding Bid (€)	GGC Decision
G1	Contribute to outreach and education about ocean mapping (GEBCO World Map printing)	H		Continuous		O	Chair Outreach WG		7,000	
G2	Development of outreach and educational materials (Jigsaw puzzle for World Map and presentation files)	M		2015	2018	P	All members of GEBCO GC through the Chair Outreach WG		2,000	
G3	Development of webpage (for secondary school student etc.)	M		2015	2018	O	All members of GEBCO GC through the Chair Outreach WG		11,000	
I1	Develop short course and supporting material on compiling digital bathymetric models	H				O	All members of GEBCO GC through the Chair Outreach WG		?	

1.2 GGC Meetings (IHO Task 3.8.1.1 refers)

Date	Location	Activity
7-11 October 2013	Venice, Italy	1 st Meeting
13-15 June 2014	IHB, Monaco	2 nd Meeting
5-9 October 2015	Kuala Lumpur, Malaysia	3 rd Meeting
10-14 October 2016	Viña del Mar, Chile	4 th Meeting

Chair: Hyo Hyun Sung	Email: hhsung@ewha.ac.kr
Vice-Chair:	Email:
Secretary:	Email:

Draft Terms of Reference for Outreach Working Group

Submitted by Outreach Working Group

SUMMARY

Executive Summary: It is needed to discuss the ‘Terms of Reference and Rules of Procedure’ for the GEBCO Outreach working group.

Action to be taken: To establish Terms of Reference for GEBCO outreach working group

Related documents: GGC Terms of reference and Rules of Procedure dated 11 September 2015

Terms of Reference and Rules of Procedure for Outreach Working Group (Draft)

Preamble

At a meeting of GEBCO Guiding Committee (GGC) in 2013, it was seriously discussed that a new Working Group was required to coordinate and encourage for bathymetric data creation and application for all people in all fields, and enhance regional and global activities to help build the necessary public awareness of GEBCO products. In 2014 a roadmap for this outreach and education activities was developed, and in 2015 web subpages were constructed based on the roadmap. Authority for the creation of this working group is included in the goals of the IHO-IOC GEBCO Project, paragraph 8, which states that the IHO-IOC GEBCO Project aims to “Bring together the ocean mapping community and users of bathymetry thereby leading to products that are more widely used,” and is also included in the GGC Terms of Reference, paragraph 9, which states that “The GEBCO Guiding Committee shall, as required, establish subordinate bodies (sub-committees and working groups) to fulfil the Committee Work Programme and approve the Terms of Reference and Rules of Procedure of those bodies, reviewing annually the continuing need for each subordinate body.”

1. Terms of Reference

- 1.1 The Working Group reports to the Joint IOC-IHO GEBCO Guiding Committee (GGC) as its designated authority for all outreach activities relevant to the goals of GEBCO Project as set out in the Guiding Committee Terms of Reference and Rules of Procedure.
- 1.2 The Working Group shall:
 - 1.2.1 Define GEBCO Project’s unique role in extension, outreach, and education based on the purpose of GEBCO Project.

- 1.2.2 Promote multi-stakeholder participation for the bathymetric data creation and application for all in all fields.
- 1.2.3 Provide and facilitate multi-stakeholder inputs into the GEBCO Projects.
- 1.2.4 Identify opportunities for GEBCO products to better connect with multi-users through extension, outreach and education.
- 1.2.5 Explore the communication paths between GEBCO Projects and its user to improve channels and enhance processes.
- 1.2.6 Review outreach activities and funding support for programs involved in extension, outreach, and education.

2. Rules of Procedure

- 2.1 Membership of the Working Group is covered by the following rules:
 - 2.1.1 The Working Group shall normally consist of up to 10 members appointed by the Joint IOC/IHO GEBCO Guiding Committee (GGC). They shall comprise representatives of IHO Member States (MS), Expert Contributors (EC) and observers from accredited NGIOs. The IHO Secretariat may also be represented.
 - 2.1.2 EC membership is open to entities and organizations that can provide relevant and constructive contribution to the work of the Working Group.
 - 2.1.3 Members of the Working Group shall be appointed for a five-year period, renewable for further five-year terms by majority recommendation of the Working Group and with the approval of the GGC. The Working Group Chair shall inform the GGC of any foreseeable vacancy in a timely manner.
 - 2.1.4 Members of the Working Group are experts acting exclusively for the benefit of the Joint IHO-IOC GEBCO Project.
 - 2.1.5 The Chair and the Vice-Chair of the Working Group are designated by the GGC for a five-year period but not exceeding their current membership of the Group. The Chair will normally be succeeded by the Vice-Chair. The Chair and Vice-Chair may be re-appointed for one additional five-year period. If a Secretary is required, he/she should normally be drawn from a member of the Working Group.
- 2.2 The Chair or, in his/her absence, the Vice-Chair shall conduct the business of the Working Group. Meetings will usually be held every year, ideally before the GGC meeting. In the intervening period the Working Group shall conduct its business by correspondence (preferably electronic mail).

- 2.3 Individuals who can provide a relevant and constructive contribution to the work of the Working Group may attend meetings as Scientific Advisors with observer status, at the discretion of the Chair or Vice-Chair.
- 2.4 Entities and organizations that can provide a relevant and constructive contribution to the work of the Working Group may be represented at meetings with observer status.
- 2.5 The Working Group should work primarily by written correspondence and teleconferences.
- 2.6 Members are expected to attend every meeting of the Working Group. Working Group Members who are absent from meetings for two consecutive years will normally be considered to have resigned and new nominations shall be sought.
- 2.7 The quorum to hold a meeting shall be not less than 50% of the Working Group Members. Decisions should be made by consensus. If consensus cannot be reached, decisions shall be taken by simple majority vote. Only members present may cast a vote. The Chair shall have the casting vote if there is a tie. Dissenting opinions, if any, should be reflected in the Working Group report.
- 2.8 Recommendations of the Working Group shall be submitted to the GGC for consideration and decision.
- 2.9 The Working Group should liaise with other IHO bodies, international organizations, end users and industry to ensure the relevance and currency of its work.
- 2.10 The Working Group should report in accordance with its Work Plan to the Chair of the GGC.