

# G E B C O

## GENERAL BATHYMETRIC CHART OF THE OCEANS



### Thirty Sixth Meeting of the GEBCO Guiding Committee (GGC36)

7 – 8 November 2019, Portsmouth, New Hampshire, USA

*(Paragraph numbering is the same as the Agenda Item numbering and does not necessarily reflect the order in which matters were discussed.)*

#### 1. Opening

##### 1.1 Opening Remarks and Introductions

The Chair noted the recent deaths of two long term members and active supports of GEBCO – Sir Antony Laughton and Robert Anderson – both of whom had worked tirelessly to raise the profile of GEBCO and ocean mapping.

The Chair welcomed all and noted the successful previous three days, in particular the Map the Gaps Symposium, which was a highly successful day and demonstrated the wide aspects of activities related to the GEBCO Project and the Seabed 2030 Project. He thanked all the sponsors – CCOM-JHC/UNH, OCS-NOAA, NGA, Kongsberg Maritime, Teledyne CARIS, XPRIZE, ESRI, Terradepth and Fugro.

He highlighted the role and function of the GGC, noting the governance and leadership responsibility. He highlighted how much the profile of GEBCO has risen over the past 6 years and a great deal was attributed to the Nippon Foundation-GEBCO Seabed 2030 Project success. He noted the significant amount of work which the GGC needed to address during its meeting.

##### 1.2 Welcoming Remarks by Host

No undertaken.

##### 1.3 Opening remarks by parent bodies (IHO and IOC)

Mustafa Iptes welcomed all participants on behalf of the IHO Secretariat. He noted the importance now given to the GEBCO Project by the IHO member States with the increased visibility in line with the numerous Oceans related initiatives sponsored by the UN and its specialized agencies.

Julian Barbière welcomed all and thanked the hosts for the excellent facilities provided. He highlighted the increased engagement of the IOC member States through the established IOC Working Group and the GEBCO Project connection with proposed UN Decade of Ocean Science for Sustainable Development 2021-2030. He noted the IOC Executive Council 53 in 2020 as an opportunity to continue highlighting the importance of ocean bathymetry.

##### 1.4 Working Arrangements

No apologies had been received, only one GGC member was not present, Captain Leonid Shalnov (IOC - Russian Federation), who was now not present for a second consecutive meeting. It was agreed that the Chair would write to the IOC Executive Secretary for clarification on the membership status of IOC

appointed member. **Action 1 – Chair** The Secretary reported that the number of GGC voting members present constituted a quorum; the list of participants is at Annex A

## 1.5 Administrative Arrangements

Secretary provided details of the arrangements for the GGC36 meeting days.

## 1.6 Adoption of the Agenda and approval of report from GGC35

The agenda was adopted without change. The report of the GGC35 was approved as published. (GGC35-13).

**Decision 1: GGC36 meeting agenda adopted**

**Decision 2: GGC35 meeting report approved**

## 1.7 Review of Action Items from GGC35 (GGC36/1/7)

The Secretary went through the action list from GGC35, he highlighted a number of actions on which limited progress had been achieved, and a number of items were identified as being covered by agenda items. All participants were urged to keep the Chair and Secretary informed on progress of actions for which they were responsible.

## 1.8 Report from IRCC11 (GGC36/1/8/1 and GGC36/1/8/2) and IOC Assembly 30

The Chair reported on the IRCC11 meeting, he highlighted the outcomes relevant to the GGC and GEBCO, particularly the approval of the proposed amendments to the GGC ToRs and on the encouragement for engagement and actions in support of the GEBCO Project and Seabed 2030. The Chair also highlighted the outcomes from the IOC Assembly 30.

## 2. Reports from Parent Organizations and GGC Subordinate Bodies.

### 2.1 IHO update (GGC36/2/1)

Mustafa Iptes provided a brief summary of IHO activities since GGC35.

### 2.2 IOC update (GGC36/2/2)

Julian Barbière provided a presentation on the IOC activities since GGC35.

### 2.3 Financial update, including funds status report (GGC36/2/3)

The Secretary provided a brief overview of the current state of the GEBCO finances, he noted that allocated funds had not been spent. Sub-Committee chairs were encouraged to spend the funds allocated to support their Work Plans. This generated a number of questions and wide ranging discussion on how to use the accumulated funds. It was proposed that the Sub-Committee reports should include an annex detailing how the GGC allocated funds had been used over the reporting period. **Action 2 – Chairs**

**TSCOM/SCRUM/SCOPE** Acting-Director Seabed 2030 requested IHO Secretariat provide a final figure payment for each transactions which included any bank transfer and exchange rate charges, so that true tracking of expenditure could be undertaken. **Action 3 – IHO** It was highlighted that \$149,000 remained at the IHO from the Nippon Foundation allocation for the UNH Ocean Mapping Programme.

### 2.4 Digital Atlas Manager (GGC36/2/4)

Helen Snaith, on behalf of the Digital Atlas Manager, provided a brief presentation on the Digital Atlas report; she highlighted a number of key activities and responsibilities undertaken by BODC in respect to the GEBCO Project and Seabed 2030. She highlighted the proposed release of the GEBCO 2020 grid. She provided details and statistics on the visits to the websites and the download applications. She highlighted

the on-going work on the enhancement of the GEBCO and Seabed 2030 websites and to harmonize their appearance. It was noted that statistics for the individual websites were available in the report.

## 2.5 DCDB update, including relevant CSBWG and ASMIWG issues (GGC36/2/5)

The Director IHO DCDB, Jennifer Jencks, provided an update on IHO DCDB activities, developments and proposed future developments to enhance the viewer functions as well as data discovery and accessibility. She also highlighted the Crowdsourced Bathymetry Working Group (CSBWG) activities. In particular she highlighted the new data contributions received. The positive list of coastal states which had indicated their support for CSB within their waters of national jurisdiction was displayed; it was noted that non-IHO Member States and those who verbally supported the activity but had not formally indicated their support, were all considered to have a restriction on the activity and therefore any data received could not be made available. She highlighted the Seabed 2030 funded CSB pilot programme, which was being developed in collaboration with the United Kingdom Hydrographic Office (UKHO) and the South African Navy Hydrographic Office (Hydro SAN). It was suggested that the proposed IHO CSB ambassador proposal could be extended to have Seabed 2030 ambassadors for each RHC. The IOC was asked to assist in encouraging coastal states to allow the collection and publication of data gathered in their waters of national jurisdiction in support of Seabed 2030 and the CSB initiatives. The IOC agreed to raise the issue within the IOC member state community. **Action 4 – IOC** It was proposed that a joint statement should be developed by the IOC and IHO Secretariats to articulate support for the release and publication of bathymetric data. **Action 5 – IOC/IHO** IHO resolution 1/2017 was highlighted, the vice-Chair suggested that the IOC could leverage the concerns and initiatives highlighting sustainable development and climate change to influence national political positions to remove the present restrictions. It was suggested that the GEBCO engage directly with the IHO and IOC regional meetings to highlight the current restrictions and what actions individual coastal states could do to help remove them. **Action 6 – Chair/vice-Chair SCRUM/Director Seabed 2030**

## 2.6 SCUFN Report (GGC36/2/6)

Chair SCUFN, Han Hyun-Chul, provided a brief report on the activities of SCUFN, he highlighted the data contributions from successful naming applications as well as progress on the development of gazetteer by Korea Hydrographic and Oceanographic Agency (KHOA). He described an automatic discovery process for undersea features. He highlighted an item on which GGC guidance was required - should SCUFN deal with features that are not visible on a 1: 1,000,000 scale map? The Chair noted that this year was the first year that supporting data had been provided to the DCDB by applying states. Chair SCUFN noted that a decision was required due to the increase in resolution of the data, which has the potential to reveal an unmanageable number of features and naming applications. This generated considerable discussion on what constituted a significant feature. SCUFN proposed that only a feature shown at a map scale of  $\geq 1 : 1,000,000$  or 15 arc-second grid bathymetric data and for a minor feature it should be an important landmark of science. It was proposed that the size of the feature should be the determinant particularly with the variable grid resolution target for Seabed 2030. It was suggested that alignment with the processes used for terrestrial maps should be the guide, thus the number of cells a feature covers should be the guide with two cells being the standard. The GGC tasked SCUFN to review the proposal overnight and return with revised wording and size criteria for further consideration.

The Chair SCUFN provided an alternative proposal to give guidance on the minimum size of feature to be considered by the SCUFN for a naming proposal. It was proposed that a variable depth range grid cell size could be used, which would also align with the proposed Seabed 2030 coverage depth variable resolution. It was agreed that SCUFN deals with a feature shown at the GEBCO gridded bathymetric map between 60°S and 60°N and in the IBCSO and IBCAO maps above these respective latitudes. For features not showing in these gridded bathymetric maps, they should be an important landmark of science or hydrography to be considered.

**Decision 3: GGC agreed to use the GEBCO gridded bathymetric map between 60°S and 60°N and in the IBCSO and IBCAO maps above these respective latitudes approach and for the Chair of SCUFN to assess the impact on SCUFN's work**

## 2.7 TSCOM Report (GGC36/2/7)

The vice-Chair TSCOM, Caitlyn Raines, provided a brief report on the activities of TSCOM and the outcomes of the meeting held 4-5 November. She requested the GGC consider a number of items:

- Approve the revised ToRs;
- Approve the Work Plan;
- Move responsibility for B-10 to SCOPE;
- Apply to IRCC12 and IOC EC 53 to convert B-11 into a e-publication format; and
- Expand the TSCOM/SCRUM/SCOPE and Symposium to 4/5 days and separate from the GGC meeting period.

It was agreed that B-10 should be moved to come under the responsibility of SCOPE and a consideration to bring it up to date. It was agreed that application should be made to IRCC to convert B-11 to an e-publication format. The proposal to amend the structure generated considerable discussion and it was agreed that it would be more fully addressed during the wider communications and Seabed 2030 future activities under agenda time 7.

**Decision 4: responsibility for B-10 moved to SCOPE**

**Decision 5: request IRCC to consider covering B-11 to an e-publication format**

## 2.8 SCRUM Report (GGC36/2/8)

The Chair SCRUM, Vicki Ferrini, provided a brief overview report of the activities of SCRUM and outcomes of the meeting held 4-5 November. She highlighted the engagement with the Regional Data Centers and the RHCs. She requested the GGC to consider a number of items:

- Approve the election of Aileen Bohan (Ireland) as vice-Chair;
- Approved the draft revised ToRs;

Evert Flier noted the decision by the IHO Council to require the RHCs to report to IRCC on the percentage coverage within their region that was 'Seabed 2030 compliant', for which they would be requesting the information from the Regional Centers, which should increase their engagement. The GGC endorsed the election of Aileen Bohan as the new vice-Chair of SCRUM.

**Decision 6: endorse the election of Aileen Bohan as the new vice-Chair of SCRUM**

## 2.9 SCOPE Report

The Chair SCOPE, Hyo Hyun Sung, provided a brief overview of SCOPE activities, she highlighted the development of the communications strategy and the growing membership of the SCOPE. She noted the lessons learnt from presentation given and the outcomes of the symposium. She provided details of the main outcomes from the breakout discussions.

She, with the support of the Symposium convener, requested the GGC to consider a number of items:

- Increasing the length of the symposium and charging a registrations fee;
- Keeping the symposium as part of the sub-committee meeting period;
- Agree to a correspondence election for a new vice-Chair, to be reported by email;

Evert Flier questioned whether the GEBCO community had the necessary communication skills, particularly social media, to develop and support the message which needs to be articulated. Tim Kearns (USA) volunteered for the position of vice-Chair of SCOPE.

It was agreed that the BODC would work with the Chair SCOPE to incorporate the Outreach website content into the GEBCO website in the future. **Action 7 – BODC/Chair SCOPE**

### 3. Nippon Foundation Related Programmes (GGC36/3/1)

3.1 Robin Falconer provided a background brief on the engagement with the Nippon Foundation, he highlighted the level of funding support that has been provided over the past 16 years. He noted the increased engagement and interaction between the Nippon Foundation, The IOC and IHO Secretariats and the GEBCO community.

3.2 Rochelle Wigley provided a brief update on the UNH training programme and its contents. She provided details on the geographic spread of present and past students, it was noted that 90% of the past students were still engaged in ocean mapping related activities. (See presentations.zip GGC36/3/2)

Hadar Sade provided a short brief on a new initiative as a follow-on from the XPRIZE success. He described the Map the Gaps Not for Profit Organization (NPO), which was designed to harness the enthusiasm, skills and knowledge of those involved with the aim of providing outreach and education, developing partnerships and providing referral, information, mission and data processing services whilst supporting international and regional efforts. It was requested that Tim Kearns provide a copy of the Map the Gaps articles of incorporation to the GGC for use as an example for the NPO. **Action 8 – Tim Kearns** (See presentations.zip GGC36/3/3)

It was agreed that the Chair would write a letter of thanks to the Nippon Foundation for its on-going support to the GEBCO Project. **Action 9 – Chair**

3.3 Covered under other agenda items.

3.4 Covered under other agenda items.

3.5 Covered under other agenda items.

### 4. GEBCO Engagement with External Bodies

4.1 Participation at IHO and IOC Regional Meetings (GG36/4/1)

Chair SCRUM provided details on the representation of GEBCO at IHO RHCs and IOC Regional meetings. She also provided details on attendance at Regional IBC meetings. It was noted that there needed to be careful coordination between Seabed 2030 and SCRUM representation. Graham Allen noted that the attendance and participation list was considerably larger than just those highlighted. IOC agreed to provide details of future meetings for inclusion in the list as had been the case for 2019. Evert Flier highlighted the CSBWG proposal to establish CSB ambassadors for each IHO RHC; he suggested that this initiative could be extended to include Seabed 2030 ambassadors for all IHO RHCs and IOC Regions. He agreed to engage with Director DCDB and USA to investigate options, which could be reviewed after the forthcoming Meso-American and Caribbean Sea Hydrographic Commission (MACHC) meeting, which was programmed for early December. He agreed to provide feedback on the outcomes to refine the approach for future meetings. **Action 10 – Evert Flier/USA** IOC was invited to consider a similar approach for their regional events.

4.2 Covered during Sub-Committee reports.

4.3 Covered during Sub-Committee reports.

### 5. Documents and Publications

5.1 Document Review and status (GGC36/5/1/2)

It was agreed that the status of the publications had been covered adequately in the Sub-Committee reports.

5.2 Review of ToRs and RoPs (GGC36/2/7, GGC36/2/8, GGC36/2/9 and GGC36/5/2)

The revised ToRs for the Sub-Committees were highlighted to the GGC by the Secretary, who highlighted the additional sentence which had been added to ensure the vice-Chairs had the authority to act in the absence of the Chair. Marzia Rovere noted a minor editorial, which it was agreed should be completed by the relevant Chairs and vice-Chairs. **Action 11 – Chairs TSCOM/SCRUM** It was noted that the SCUFN ToRs needed to have the same wording to give the vice-Chair authority in the absence of the Chair. **Action 12 – Chair SCUFN** The GGC approved the revised ToRs for TSCOM, SCRUM and SCOPE as presented.

**Decision 7: GGC approved the ToRs of TSCOM, SCRUM and SCOPE**

**Decision 8: GGC approved the establishment of SCOPE under the approved ToRs**

**Decision 9: Reappoint TSCOM and SCRUM to continue their work under the revised ToRs**

### 5.3 Relevant IHO Resolutions

It was agreed that the Seabed 2030 Project Team needed to review the proposed revisions to the IHO resolutions before they were presented to the GGC for endorsement and submission to the IHO. This task remains ongoing.

## 6. Seabed 2030

### 6.1 Review of Year 2 report (GGC36/6/1)

Graham Allen, acting Director Seabed 2030, provide an overview of Year 2 Seabed 2030 project activities. He noted that the GGC was required to endorse the Seabed 2030 Year 2 Report, he also noted the GGC was also required to approve the Year 3 plan and budget. He explained the governance of the project, articulating the individual elements; he highlighted that Seabed 2030 is a project of GEBCO. He noted that there had been identified deliverables – GEBCO 2019 grid and the Funding Strategy – which had been achieved. The process of generating the grid was described, the data flow process was highlighted and the improvements and increases in data coverage from the 2014 grid were noted. It was noted that an annual increase of 8% in coverage was required to achieve the project objective.

The acting Director requested the GGC endorse the Year 2 Annual Report.

**Decision 10: GGC endorsed the Seabed 2030 Year 2 Report**

### 6.2 Review of Funding Strategy (GGC36/6/2)

David Millar provided a presentation on Seabed 2030 funding strategy, which is being developed by the WG established at GGC35. He noted the members of the WG and the tasks set. He highlighted the external influences and events which had impacted on the strategy development. He noted that there had been insufficient data on the user community and the no value benefit statement at the outset of the project. He displayed the outline structure of the document, highlighting the justification and benefits statements which had been generated. He highlighted the opportunities and challenges which had been identified:

- Finalize value position;
- Coordination with UN Decade fund raising plans;
- Leverage UN Decade social science and social economics engagement;
- Relationship between GEBCO/Seabed 2030 Fundraising Strategies and Communication Strategies;
- Message to and engagement with Ocean NGOs; and
- Funding legal and administrative framework.

IOC agreed with the need to coordinate activities with the UN initiatives. **Action 13 – David Millar** He suggested utilizing the IOC networks to raise awareness and gain greater stakeholder involvement and contributions. IHO noted that fundraising was the biggest challenge which required a number of approaches tailored to different communities. He suggested that in addition to the Director Seabed 2030 activities, the IOC and IHO Secretariats and the GGC need to be engaged. Vice-Chair suggested that priority areas should be identified within the separate regions, it was proposed that SCRUM should coordinate with the Seabed 2030 Regional Centers. It was suggested that creating the necessary legal framework should be the highest



priority activity to allow fundraising initiatives to commence. It was noted that participation in non-ocean related fora should be a consideration to broaden the engagement beyond the community that was already aware of the issues. The IOC described the activities in which it had been involved to develop the strategies for the UN Decade. Tim Kearns noted that it should be identified for what the funds are being raised and what target sum had been considered, he also noted that external professional assistance may be required to take the strategy forward. The GGC discussed a proposal that a budget allocation for consultancy in support of the fund raising strategy could be considered. Canada suggested that leverage of the knowledge could be used in a capacity building manner, it felt that this was more a core activity for the currently established capacity building organizations within the IHO and IOC. Tim Kearns suggested that there were a number of approaches which could be followed, including acting as a facilitator to bring Regional Centers and potential donors together without having to process any funds directly. Larry Mayer suggested that the task of mapping the oceans was a nation state collaborative programme, rather than a single Project initiative, with individual nations being encouraged to map their own waters and joint/multi-nation programmes to map international waters. IHO highlighted the legal and financial issues which need to be considered. The USA noted that consideration needed to be given to the views and delegated authority given by the member states to the subordinate body, he noted that communication with the Member States was vital to gain and maintain their support.

## 7. GEBCO Future

### 7.1 GGC Subordinate Bodies Work Plans and Funding (GGC36/7/1/1/1-4)

The Secretary displayed the subordinate draft Work Plans and the GGC consolidated Work Plan along with the expenditure spreadsheet. Due to late revisions, it was agreed that the Secretary would circulate the draft Work Plans and budget spreadsheet for consideration and prioritized adjustment. **Action 14 – Secretary** The Chairs of the subordinate bodies were requested to amend their individual Work Plans to reflect the GGC input and resubmit to the Secretary for inclusion in the final meeting report. **Action 15 – Chairs** **TSCOM/SCRUM/SCOPE/SCUFN**

### 7.2 Seabed 2030 Year 3 (GGC36/7/2)

Graham Allen, acting Director Seabed 2030, provided a comprehensive presentation on the proposed Year 3 Work Plan and Budget. He played a recorded message from the new Director of the Seabed 2030 Project. He provided details of the recruitment process

He introduced the Seabed 2030 communications plan with a timeline across Year 2 and Year 3. He noted the GGC had provided implicit endorsement of the Year 2 plan through the consultation process, he recognised the need to inform the GGC of what had been approved by the Nippon Foundation after submission. He then described proposed new timelines and structure for the meetings to allow better review and consideration of the Seabed 2030 Work Plan and Budget submission by GGC prior to submission to the Nippon Foundation. He highlighted a number of timing challenges, which needed to be considered prior to the GGC deciding on a revised timeline and structure. Tim Kearns suggested the timing of the symposium should be a major consideration in relation to the strategic objectives for the symposium as a major outreach and community building tool. Graham Allen noted that the decision to separate the GGC from the sub-committees was generally supported. Graham Allen suggested that having two GGC meeting per year would solve a number of challenges. The GGC did not support having two meetings per year. The GGC did support having one physical meeting and one virtual meeting per year. It was agreed that reviewing the Annual Report could be undertaken virtually at an appropriate time. The GGC supported holding the physical meeting in March to allow review of the subordinate body reports and preparation of reports to the IHO and IOC oversight bodies.

**Decision 11: GGC to hold a physical meeting and virtual meetings, as required, in each year**

**Decision 12: GGC approved the timing of the physical meeting for northern spring period each year**

The Chair suggested that the timing could be more flexible to take into account other events and well as the survey activity programmes. It was proposed that the sub-committee and symposium could remain in the current timing. The IHO noted that the IHO and IOC were able to host the GGC meetings on an annually

rotating basis. The USA noted the disadvantages of only hosting the meetings in Europe. The Chair of SCUFN noted that the SCUFN meeting schedule was dictated by the offers from the members. The Chair proposed that the GGC meeting would benefit from closer association with the IOC and IHO Secretariats. Graham Allen suggested that the Secretariats were always an option but not the only option. He noted that the GGC was a governance focused meeting, whilst the information community focused events could be moved around. Tim Kearns suggested including a degree of flexibility to take into account the regional host preferences. Tim Kearns suggested the subordinate body chairs and the symposium co-conveners should produce a two year rolling calendar of hosts. **Action 16 – Chairs TSCOM/SCRUM/SCOPE/Co-Conveners**

**Decision 13: GGC agreed that the subordinate bodies should meet annually in the northern autumn period**

It was suggested that the current timing could be continued for a further year as a back-up, if identifying a venue was not available.

Graham Allen displayed the Seabed 2030 Year 3 Work Plan for consideration by the GGC. He also displayed the proposed budget to resource the Work Plan, he highlighted the additional work streams, Vision to Action and Extending Mapping of Ocean Frontiers initiative, which had been funded directly by the Nippon Foundation. Graham Allen explained the background and proposal for the Mapping of Ocean Frontiers initiative. Evert Flier offered to provide the Marine Research MoU for consideration by other organizations.

It was proposed that the 2020 meetings would be in the November period with 5 days allocated to the subordinate bodies and symposium to be held in Brest and a three day GGC meeting held the following week at the IOC.

**Decision 14: GGC approved the proposed interim meeting schedule**

Graham Allen described the three new initiatives announced at the Vision to Action by Mr Sasakawa, Chair of the Nippon Foundation – *Crowdsourcing, Mapping Ocean Frontiers and Technology Innovation* – which need to be considered by the GGC. He requested comments from the sub-committee chairs. It was put forward that these initiatives should primarily be supported by additional Nippon Foundation funding rather than reallocating already committed Seabed 2030 funds since they are needed for the activities involved to build the GEBCO grid. Robin Falconer noted that it had been understood that there was an implicit acknowledgement that additional resources would be made available. It was noted that input would be solicited from the sub-committees. Chair SCRUM provided the outcomes of initial discussions at the recent meeting. USA requested clarification on the role of the GGC in relation to these activities and the programmes already in progress. David Millar suggested closer engagement and coordination between the various initiatives was vital to ensure efficient use of the resources, Johnathan Kool proposed investigating supporting the data handling rather than the data collection. Graham Allen noted that the Nippon Foundation would anticipate discreet programmes rather than leveraging existing initiatives, where its support would be less obvious. Graham Allen agreed to take the outcomes of discussions at the GGC for inclusion into further communications with the Nippon Foundation. **Action 17 – Director Seabed 2030**

The GGC requested the sub-committees to liaise and develop proposals, in coordination with the Regional Centers and appropriate relevant IHO and IOC bodies, to identify priority areas for mapping and crowdsourced bathymetry activities. **Action 18 – Chairs TSCOM/SCRUM**

The USA requested the GGC to develop a position on crowdsourced bathymetry which could be taken to IOC and IHO regional meetings to increase the participation of individual coastal states to support for CSB. Graham Allen proposed that GGC should develop a GGC position on CSB, Director DCDB volunteered to develop a draft GGC paper in cooperation with appropriate subordinate bodies. **Action 19 – Director DCDB/EF/DM** It was agreed that there was a need to develop an implementation plan for communication of the CSB position. **Action 20 – Director DCDB/EF/DM** It was proposed that the GGC requested the IRCC to task the CSBWG to engage directly with the GGC and its subordinate bodies as necessary to progress the programme. **Action 21 – Chair**



## 8. Secretary Responsibilities

### 8.1 Appoint GEBCO Secretary for the next lustrum and confirm responsibilities (GGC36/8/1)

The Chair noted that the current Secretary would be completing his term in 2020 and therefore the GGC needed to consider the appointment of a Secretary. It was noted that request should be for the IHO Secretariat to provide the secretarial support and it was for the Secretariat to decide on the actual staff member. The GGC requested the Chair communicate with the IHO Secretary-General for continued provision of the secretarial support. **Action 22 – Chair**

## 9. GGC Membership (GGC36/9)

### 9.1 Identification of individuals, whose terms are due to complete within the next two years

The two new IHO appointed members of the GGC were introduced.

### 9.2 Details of nominations to fill vacancies

It was noted that Marzia Rovere was completing her first 5 year term. She had informed IOC Secretariat that she was available to serve an additional term, to which the GGC unanimously agreed.

**Decision 15: GGC approved the continuation of Marzia Rovere for a second 5 year term**

It was requested the Chair informed IOC Executive Secretary of the decision. **Action 23 – Chair**

## 10. Next Meeting

### 10.1 Dates and venue for GGC37

It was proposed that the GGC37 should commence on the following Monday after the completion of the subordinate body meetings. It was agreed that the Secretary would liaise with the Service hydrographique et océanographique de la Marine (Shom) and IOC to identify appropriate dates and venues to meet the GGC requirements. **Action 24 – Chair TSCOM/IOC/Secretary** It was agreed that the dates and location for GGC38 needed to be confirmed early in 2020. **Action 25 – Chair/Secretary**

### 10.2 Draft Agenda for GGC37 (GGC36/10/2)

The Secretary noted that the current agenda structure had served its purpose and that it was now appropriate to revise the structure. The Secretary proposed to provide a revised version for consideration and amendment by the GGC, Annex M. **Action 26 – GGC**

## 11. Any Other Business

11.1 It was proposed that a Bob Anderson GEBCO Scholarship Fund be established at UNH. Larry Mayer noted that the UNH had approved the initiative and that John Hall had made an initial contribution. It was agreed that the obituary should be posted on the UNH and GEBCO websites, which would include a link to the Fund donation site.

**Decision 16: GGC approved the establishment of the scholarship fund**

## 12. Review of Actions

The List of Actions generated from the meeting were reviewed and agreed.

All Action Items are marked in this report and are collated together at Annex D. An updated list of the Action Items will be maintained on the GGC37 document web page and all those who have actions to complete should keep the Chair, vice-Chair and the Secretary informed of progress. **Action 27 – All**

It was agreed that the Secretary would circulate a draft meeting report to all attendees by 15 November.

**Action 28 – Secretary** Attendees were requested to provide any comments and input by 29 November.

**Action 29 – All** It was intended the final meeting report would be published by 6 December. **Action 30 – Secretary**

The Secretary and the Chair would prepare the final report to IRCC12 and IOC Executive Council 53 using the format required by IRCC and the IOC Assembly. It was noted the report to IRCC12 needs to be submitted by 24 April 2019 and that to the IOC Executive Council by 15 May 2019. **Action 31 – Secretary/Chair**

### **13. Closure of the Meeting**

13.1 The Chair closed the meeting, thanking the host, UNH, and all the participants for all their efforts and engagement.

The following Annexes are attached:

- A. GGC36 – List of Participants.
- B. GGC36 – Agenda
- C. GGC36 – List of Documents
- D. GGC36 – List of Actions
- E. SCRUM Work Plan and Budget – Final version
- F. SCUFN Work Plan and Budget – Final version
- G. TSCOM Work Plan and Budget – Final version
- H. SCOPE Work Plan and Budget – Final version
- I. Consolidated GEBCO Work Plan and Budget – Final version
- J. Consolidated Funding Plan – Final version
- K. GEBCO GC ToRs
- L. Seabed 2030 Year 3 Work Plan
- M. List of GGC Members
- N. Draft agenda for GGC37

### LIST OF PARTICIPANTS

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**Bold names – GGC**

# G E B C O

## GENERAL BATHYMETRIC CHART OF THE OCEANS



### Thirty Sixth Meeting of the GEBCO Guiding Committee (GGC36)

**Portsmouth, New Hampshire, USA**

7 – 8 November 2019

### Agenda

*Version 5.0; 29 octobre 2019*

#### **1 OPENING REMARKS AND ADMINISTRATIVE ARRANGEMENTS – 30 minutes**

- .1 Opening Remarks and Introductions – **Chair**
- .2 Welcoming Remarks by Host – **UNH**
- .3 Opening remarks by parent bodies – **IHO and IOC Secretariats**
- .4 Working Arrangements – **Secretary/Hosts**
- .5 Administrative Arrangements – **Secretary/Hosts**
- .6 Adoption of the Agenda and approval of report from GGC35 – **Chair**
- .7 Review of Action Items from GGC35 – **Secretary**
- .8 Report from IRCC11 – **Chair**

#### **GEBCO TODAY**

#### **2 REPORTS FROM PARENTAL AND SUBORDINATE BODIES – 120 minutes**

Brief reports (5 minutes) will be received, highlighting only significant events, achievements, outcomes, outputs/deliverables and matters requiring GGC action, full reports can be downloaded from the GGC website; for TSCOM, SCRUM and SCOPE, revised ToRs and RoPs will be presented:

- .1 IHO update – **Iptes**
- .2 IOC update – **Barbière**
- .3 Financial update, including funds status report – **Secretary**
- .4 Digital Atlas Manager – **BODC**
- .5 DCDB update, including relevant CSBWG and ASMIWG issues – **DCDB Director**
- .6 SCUFN – **Chair SCUFN**
- .7 TSCOM – **Chair TSCOM**
- .8 SCRUM – **Chair SCRUM**
- .9 SCOPE – **Chair SCOPE**

### 3 NIPPON FOUNDATION – 30 minutes

Brief reports (5 minutes) will be received highlighting significant events, outcomes and matters requiring GGC action, full reports can be downloaded from the GGC website:

- .1 NF Programme Management Committee (NFPMC) report – **Chair NFPMC**
- .2 UNH training programme update – **Course Manager**
- .3 Nippon Foundation Ambassador programme – **Chair NFPMC**
- .4 NF funds – **Chair NFPMC**
- .5 NFPMC membership – **Chair NFPMC**

### 4 GEBCO ENGAGEMENT WITH EXTERNAL BODIES – 60 minutes

- .1 Participation at IHO RHC and IOC Regional meetings – **Chair SCRUM/Secretary**
- .2 Engagement with international programmes, why and outcomes? – **Chair/All**
- .3 Update on who are the users of GEBCO products and datasets? Which methods are appropriate for discovering the users and uses of GEBCO products and datasets – **Head BODC/Director DCDB**

### 5 DOCUMENTS AND PUBLICATIONS – 15 minutes

- .1 Document Review Status – **Chair/Secretary**

Title	IHO Number	IOC Number	Edition/date
<i>Standardization of undersea feature names</i>	B-6	-	Edition 4.1.0 September 2013; new Edition 4.2.0 in preparation
<i>Gazetteer</i>	B-8	-	V1.1.1
<i>GEBCO digital atlas</i>	B-9	-	08 Grid March 2015
<i>The history of GEBCO</i>	B10	-	April 2003
<i>GEBCO Cookbook</i>	B-11	Manuals and Guides 63	October 2019

- .2 ToRs and RoPs review (GGC) – **Chair/Secretary**

### 6 SEABED 2030 – 60 minutes

Progress brief on activities of Seabed 2030 Project against agreed Business Plan, including funding state, RDACC and GDACC activities, outcomes from interaction with IOC and IHO Secretariats and endorsement of Work Plan 2020-2021:

- .1 Report on progress and update brief - main deliverables and communications, followed by report discussions – **acting Project Director**
- .2 Funding strategy – **Millar**

**GEBCO TOMORROW****7 GEBCO FUTURE****.1 GGC Subordinate bodies' Work Plans 2020-2021 – 60 minutes**

- .1 Approve funding requests and Work Plans of Subordinate bodies, including outputs/deliverables for next period – **Chair/Secretary**

Chairs will present draft funding requests and Work Plans for their Sub-Committee or Working Group; identifying outputs, deliverables and appropriate milestones for consideration and approval of the GGC.

- .1 SCUFN – **Chair SCUFN**;
- .2 TSCOM – **Chair TSCOM**;
- .3 SCRUM – **Chair SCRUM**; and
- .4 SCOPE – **Chair SCOPE**

- .2 Review of GEBCO Education and Outreach strategy, including coordination and engagement between related initiatives and projects (GEBCO/Seabed 2030/CSB/UN Decade/UN SDG) – **Chair SCOPE/Chair /Secretary**

**.2 Seabed 2030 - 120 minutes**

The GGC will be appraised of outcomes and actions arising from the Workshops, seminars and events pursuing the Seabed 2030 Project and vision, in particular:

- .1 Future actions, key outputs, deliverables and milestones – **acting Project Director**
- .2 Update on integration with existing GEBCO bodies – **Chair/ acting Project Director**
- .3 Work Plan and funding bids 2021-2022 – **Chair/ acting Project Director**

**.3 GGC Work Plan 2020-2021 – 60 minutes**

- .1 Approve GGC funding requests and Work Plans including outputs/deliverables for next period – **Chair/Secretary**

**8 SECRETARY RESPONSIBILITIES – 15 minutes**

- .1 Appoint GEBCO Secretary for the next lustrum (2020-2024) and confirm responsibilities – **Chair**

**9 GGC MEMBERSHIP – 30 minutes**

- .1 Identification of individuals, whose terms are due to complete within the next two years – **Secretary**
- .2 Details of nominations to fill vacancies – **Chair/Secretary**

**10 NEXT MEETING – 15 minutes**

- .1 Dates and venue for GGC37 – **Secretary**
- .2 Draft Agenda for GGC37 – **Secretary**

- 11     **ANY OTHER BUSINESS** – Chair/Secretary – *30 minutes*
- 12     **Review of Action Items from GGC36** – Secretary – *30 minutes*
- 13     **CLOSURE OF THE MEETING** – Chair – *15 minutes*



**GGC36 - List of Documents**

Document No	Document Title	Date uploaded
GEBCO 2019 Letter	<a href="#">Invitation Letter</a>	26 April 2019
GEBCO 2019 Letter Annex A	<a href="#">Logistic Information</a>	26 April 2019
GEBCO 2019	<a href="#">Outline Week Programme</a> v1.0	31 October 2019
GEBCO Symposium 2019	<a href="#">Symposium Flier</a>	6 August 2019
GEBCO Symposium 2019	<a href="#">Symposium Programme</a> v1.0	31 October 2019
GEBCO 2019	<a href="#">Document Template</a> (Word version)	6 March 2019
GEBCO 2019	<a href="#">Presentation Template</a> (PowerPoint version)	6 March 2019
GEBCO 2019	<a href="#">List of Participants</a> v11.0	5 November 2019
GGC36-1.6.1	<a href="#">Draft Agenda</a> v5.0	29 October 2019
GGC36-1.6.2	<a href="#">GGC35 Meeting Report</a>	6 March 2019
GGC36-1.7	<a href="#">GGC35 List of Actions</a> - updated 29 April 2019	29 April 2019
GGC36-1.8.1	<a href="#">GEBCO Report to IRCC11</a>	25 July 2019
GGC36-1.8.2	<a href="#">IRCC11 Outcomes</a>	25 July 2019
GGC36-2.1	<a href="#">IHO Report</a>	5 November 2019
GGC36-2.2.1	IOC Report (See Presentations .zip)	
GGC36-2.3.Rev.1	<a href="#">Financial Report</a>	5 November 2019
GGC36-2.4	<a href="#">Digital Atlas Manager Report</a>	18 October 2019
GGC36-2.5	<a href="#">DCDB update</a>	6 November 2019
GGC36-2.6	<a href="#">SCUFN Report</a>	23 October 2019
GGC36-2.7	<a href="#">TSCOM Report</a>	7 November 2019
GGC36-2.7.1	<a href="#">TSCOM TorR -Draft</a> (Track Change)	5 November 2019
GGC36-2.7.2	<a href="#">TSCOM ToRs</a> - Draft (Clean)	5 November 2019
GGC36-2.8	<a href="#">SCRUM Report</a>	7 November 2019
GGC36-2.8.1.Rev.1	<a href="#">SCRUM ToRs - Draft</a> (Track Change)	5 November 2019
GGC36-2.8.2.Rev.1	<a href="#">SCRUM ToRs - Draft</a> (Clean)	5 November 2019
GGC36-2.9	<a href="#">SCOPE Report</a>	28 November 2019
GGC36-2.9.1.Rev.1	<a href="#">SCOPE ToRs - Draft</a> (Track Change)	5 November 2019
GGC36-2.9.2.Rev.1	<a href="#">SCOPE ToRs - Draft</a> (Clean)	5 November 2019
GGC36-3	<a href="#">NF Related Programmes Report</a>	28 October 2019

GGC36-4.1	<a href="#">Regional Hydrographic Commission meeting programme</a>	1 October 2019
GGC36-5.1.2	<a href="#">GEBCO Cookbook Report</a>	28 October 2019
GGC36-5.1.2/Rev.1	<a href="#">GEBCO Cookbook Report</a> Rev.1	31 October 2019
GGC36-5.2	<a href="#">GGC ToRs and RoPs</a>	25 July 2109
GGC36-6.1	<a href="#">GEBCO Seabed2030 Year 2 Report v1.0</a>	9 September 2019
GGC36-6.1-Appendix 1	<a href="#">Seabed 2030 Year 2 Presentations</a>	9 September 2019
GGC36-6.1-Appendix 2	<a href="#">Seabed 2030 Supporters</a>	9 September 2019
GGC36-6.1-Appendix 3	<a href="#">Seabed 2030 Media Coverage in Year2</a>	9 September 2019
GGC36-6.1-Appendix 4	<a href="#">Data Contributors to GEBCO2019</a>	9 September 2019
GGC36-6.1-Appendix 5	<a href="#">Seabed 2030 Year 2 Finance Report</a>	9 September 2019
GGC36-6.1-Appendix 6	<a href="#">Seabed 2030 Year 3 Proposal to The Nippon Foundation</a>	9 September 2019
GGC36-6.1-Appendix 6.2	<a href="#">The Nippon Foundation-GEBCO Extending The Mapping of Ocean Frontiers</a>	9 September 2019
GGC36-6.1-Appendix 6.3	<a href="#">Proposal to fund Ryder Expedition</a>	9 September 2019
GGC36-6.1-Appendix 6.4	<a href="#">Seabed 2030 Year 3 Award Letter</a>	9 September 2019
GGC36-6.1-Appendix 7	<a href="#">Seabed 2030 Project Year 2 Work Plan All deliverables</a>	9 September 2019
GGC36-7.1.1.1	<a href="#">SCUFN Work Plan and Budget</a> - Draft	29 October 2019
GGC36-7.1.1.2	<a href="#">TSCOM Work Plan and Budget</a> - Draft	8 November 2019
GGC36-7.1.1.3	<a href="#">SCRUM Work Plan and Budget</a> - Draft	8 November 2019
GGC36-7.1.1.4	<a href="#">SCOPE Work Plan and Budget</a> - Draft	29 October 2019
GGC36-7.1.2	GEBCO Education and Outreach Strategy (see presentations)	
GGC36-7.2	<a href="#">Seabed 2030 Year 3 Work Plan Report</a>	31 October 2019
GGC36-7.2	<a href="#">Seabed 2030 Year 3 Work Plan</a>	31 October 2019
GGC36-7.2	<a href="#">NF-GEBCO Seabed 2030 Year 3 Budget</a>	31 October 2019
GGC36-7.2	<a href="#">NF Chairman address to Vision to Action Event</a>	31 October 2019
GGC36-7.2	<a href="#">Seabed 2030 Year 3 presentation</a>	31 October 2019
GGC36-7.2	<a href="#">NF-GEBCO Seabed 2030 Project Structure presentation</a>	31 October 2019
GGC36-7.3.1	<a href="#">GGC Work Plan</a> and <a href="#">Budget</a>	8 November 2019
GGC36-8.1	<a href="#">Secretary role and responsibilities</a>	14 August 2019

GGC36-9	<a href="#">GGC membership list</a>	14 August 2019
GGC36-10.2	<a href="#">Draft agenda GGC37</a>	25 July 2109
GGC36-12	<a href="#">GGC36 List of Actions</a>	8 November 2019
GGC36	<a href="#">Presentations</a> .zip	14 November 2019

**LIST OF ACTIONS** – Updated 9 December 2019

Agenda Item		Subject	Status/Date	Comments	Action
Continuous					
-		NF Programme Management Report	On going	Inform IHO and IOC secretariats as soon as the date for accepting UNH applications is known	Manager NF-UNH Programme
-		Participation at IHO RHC meetings	On going	Published and maintain list of RHC meetings on the GEBCO website	Secretary/BODC
-		Participation at IHO RHC meetings	On going	Attendees representing GEBCO at meetings to provide short report for publication on GEBCO website	All/BODC
-		Participation at IOC Regional meetings	On going	IOC to provide and maintain list of regional IOC meetings for consideration of GEBCO representation	IOC/BODC
-		TSCOM-SCRUM membership	On going	Invited new participants to join the gebco_folk email contact list to maintain their engagement and keep them informed of GEBCO activities	Chairs TSCOM-SCRUM/Symposium conveners
-		IHO RHC and IOC Regional meetings	On going	Inform Chair SCRUM of ability to represent GEBCO at RHC meetings to update list	All/Chair SCRUM
-		IHO RHC and IOC Regional meetings	On going	Provide suitable material for inclusion in generic GEBCO presentation	IOC
-		GEBCO engagement	On going	Identify organizations and conferences at which GEBCO should be represented; provide brief comments on attendance to the BODC to keep the community informed of the awareness actions/activities being undertaken	All/BODC
GGC35					
12	5.3	IHO Resolutions	<del>28-Dec</del> 17Jan	Provide track change versions for Seabed 2030 Project Team input	Secretary/Director Seabed 2030
GGC36					
1	1.4	Apologies	6 Dec	Write to the IOC Executive Secretary for clarification on the membership status of IOC appointed member	Chair

2	2.3	Finance Report	GGC37	Include annex to report with details of expenditure of allocated funds	Chairs TSCOM, SCRUM, SCUFN, SCOPE
3	2.3	Finance Report	On going	Provide final figure payment for each Seabed 2030 transaction	IHO
4	2.5	DCDB Report	IOC EC 53	Raise issue with coastal states to allow the collection and publication of data gathered in their waters of national jurisdiction in support of Seabed 2030 and the CSB initiatives	IOC
5	2.5	DCDB Report	GGC37	Develop joint statement in support of data gathering in support of GEBCO	IOC/IHO
6	2.5	DCDB Report	On going	Coordinate direct engagement with IOC and IHO regional meetings	Chair/Vice-Chair SCRUM/ Director Seabed 2030
7	2.9	SCOPE Report	GGC37	Incorporate Outreach website content into GEBCO website	BODC/Chair SCOPE
8	3.2	NF Programmes	31 Jan	Provide a copy of the Map the Gaps articles of incorporation to the GGC	Tim Kearns
9	3.2	NF Programmes	6 Dec	Write letter of thanks to NF	Chair
10	4.1	IHO and IOC Regional meetings	GGC37	Initiate efforts to establish Seabed 2030 ambassadors for each IHO RHC	Evert Flier/USA
11	5.2	Review of ToRs	29 Nov	Complete identified editorial amendment	Chairs TSCOM/SCRUM
12	<del>5.2</del>	<del>Review of ToRs</del>	<del>29 Nov</del> Complete	<del>Include vice-Chair authority statement in SCUFN ToRs</del>	<del>Chair SCUFN</del>
13	6.2	Seabed 2030	GGC37	Coordinate with UN Decade fundraising activities	David Millar
14	<del>7.1</del>	<del>Review of Work Plans</del>	<del>15 Nov</del> Complete	<del>Circulate GGC and subordinate body Work Plans to GGC for review and adjustment</del>	<del>Secretary</del>
15	7.1	Review of Work Plans	29 Nov	Amend Work Plans to reflect GGC input and comments	Chairs TSCOM/SCRUM/SCOPE/SCUFN

16	7.2	Seabed 2030	GGC37	Generate two year rolling calendar of hosts for subordinate bodies and symposium	Chairs TSCOM/SCRUM/SCOPE, Symposium co-conveners
17	7.2	Seabed 2030	6 Dec	Take outcomes of GGC discussions for inclusion in communications with NF	Director Seabed 2030
18	7.2	Seabed 2030	6 Dec	In coordination with the Regional Centers and appropriate relevant IHO and IOC bodies, to identify priority areas for mapping and crowdsourced bathymetry activities	Chairs TSCOM/SCRUM
19	7.2	Seabed 2030	17 Jan	Develop GGC position on CSB and draft GGC paper in cooperation with appropriate subordinate bodies	DCDB/Evert Flier/David Millar
20	7.2	Seabed 2030	17 Jan	Develop implementation plan for the communication of the CSB position	DCDB/Evert Flier/David Millar
21	7.2	Seabed 2030	IRCC12	Requested the IRCC to task the CSBWG to engage directly with the GGC and its subordinate bodies	Chair
22	8.1	Secretary	GGC37	Communicate with IHO S-G for continued secretarial support	Chair
23	9.2	Membership	17 Jan	Inform IOC E-S for unanimous support for MR to serve a second 5 year term	Chair
24	10.1	GGC37	24 Apr	Investigate hosting and advise Sec of proposed dates for circulation to GGC	Chair TSCOM/IOC/Secretary
25	10.1	GGC38	31 Jan	Identify date and location for GGC38	Chair/Secretary
26	10.2	Draft Agenda	GGC37	Review draft agenda and propose revision to structure and content	GGC
27	12	Action List	GGC37	Keep IHO and the Chair and vice-Chair informed of progress with allocated actions	All
28	42	GGC36 Draft Report	<del>15 Nov</del> Complete	<del>Draft to be circulated for comment</del>	Secretary
29	42	GGC36 Draft Report	<del>29 Nov</del> Complete	<del>All to provide comments on draft report</del>	All
30	42	GGC36 Final Report	<del>6 Dec</del> Complete	<del>Publish final report</del>	Secretary



31	12	Report to IRCC12/IOC EC 53	10 Apr/1 May	Draft report for review and amendment.	Chair/vice-Chair/Secretary
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### **LIST OF DECISIONS** – 28 November 2019

<u>Agenda Item</u>	<u>Number</u>	<u>Decision</u>
1.6	1	GGC36 meeting agenda adopted
1.6	2	GGC35 meeting report approved
2.6	3	GGC agreed to use the GEBCO gridded bathymetric map between 60°S and 60°N and in the IBCSO and IBCAO maps above these respective latitudes approach and for the Chair of SCUFN to assess the impact on SCUFN's work
2.7	4	Responsibility for B-10 moved to SCOPE
2.7	5	Request IRCC to consider covering B-11 to an ePublication format
2.8	6	Endorse the election of Aileen Bohan as the new vice-Chair of SCRUM
5.2	7	GGC approved the ToRs of TSCOM, SCRUM and SCOPE
5.2	8	GGC approved the establishment of SCOPE under the approved ToRs
5.2	9	Reappoint TSCOM and SCRUM to continue their work under the revised ToRs
6.1	10	GGC endorsed the Seabed 2030 Year 2 Report
7.2	11	GGC to hold a physical meeting and virtual meetings, as required, in each year
7.2	12	GGC approved the timing of the physical meeting for northern spring period each year
7.2	13	GGC agreed that the subordinate bodies should meet annually in the northern autumn period
7.2	14	GGC approved the proposed interim meeting schedule
9.2	15	GGC approved the continuation of Marzia Rovere for a second 5 year term
11.1	16	GGC approved the establishment of the scholarship fund

# 1.1. IHO-IOC GEBCO Sub-Committee for Undersea Feature Names (SCUFN) Work Plan 2020-21

## 1.1 SCUFN Tasks

- B Ensure conduct of SCUFN meeting (IHO Task 3.6.1)
- E Maintain IHO bathymetric publications (IHO Task 3.6.6) including: B-6 and B-8
- J Update and enhance the GEBCO Gazetteer (B-8) for internet access (IHO Task 3.6.10) including providing the GEBCO Gazetteer as a web service via a geospatially enabled database and develop and make available public and management on-line interfaces to the Gazetteer – Develop the integration of undersea feature concepts in the S-100 framework

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/Comments	Funding Bid (€)	GGC Decision
B1	Ensure conduct of SCUFN meeting	H		Permanent		O	Chair/Sec SCUFN			
B2	Develop a repository of typical cases for helping in the consistency of the decision-making process	M	SCUFN33	2017	2021	O	Roberta Ivaldi –Kevin MacKay	SCUFN TORs and ROPs		
B3	Renewal of SCUFN Membership					C				
B4	Development a general strategy for UFN (horizontal resolution, minor features	H		2018	2021	O	Yas Ohara/SCUFN Chair/SCUFN Members	Is the scope of SCUFN still 1:1000,000 IBC Printed Charts? See Action SCUF32/xx and Doc. SCUFN32-06.1B Guidance from GGC would be appreciated		

E1	Maintain IHO bathymetric publications	L		Continuous	Continuous 2021	C		B-6 - Standardization of undersea feature names (Edition 4.2.0 of B-6 submitted to GGC for endorsement). Possible amendments to align with scufn.ops-webservices.kr		
E2	Encourage the provision of bathymetric data associated to UFN	H		2018	Continuous	O	SCUFN Chair/Secretary/SCUFN Members	GEBCO Grid Actions in progress through B-6 and development of integrated web services		
J1	Update and enhance the GEBCO Gazetteer (B-8) database	H		Annual	Annual	O	Chair/Sec SCUFN	B-8 – Gazetteer (implement SCUFN meeting decisions in the database, monitor pending names, chase SCUFN actions with proposers, chase missing data) – Work carried out by contract.	15,000€/year	
J2	Maintain the GEBCO Gazetteer as a web service via a geospatially enabled database	H		2016	Permanent	O	Chair SCUFN/ Sec./ Jennifer Jencks	B-8 – Gazetteer – Capture user requirements (incl. SCUFN Sec.), develop improvements and general maintenance..	43,000€/year. (See Doc. SCUFN32-07.1B). Funding for correcting and basic maintenance agreed by US. Need to keep it maintained	
J3	Develop and make available public and management on-line interfaces to the Gazetteer	H		2014	2022	O	Dr Han/ /KHOA	B-8 – Gazetteer Management Plan	Significant progress	
J4	Develop a S-100-based product specification (if confirmed) for Undersea Feature Names	M / L		2015	2019	O	Chair Project Team (Anna Hendi)	S-100, B-6 Harmonized definitions of generic terms across B-6, S-32, IHO GI Registry		

J5	Upgrade the quality of the geometry of major existing undersea features in the Gazetteer which are known as being inaccurate and ambiguous	M		2017	Permanent	P	SCUFN Members	B-8 - Gazetteer (Aim: 10 features / SCUFN Member / per year)		
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## 1.2 SCUFN Meetings (IHO Task 3.6.1 refers)

Date	Location	Activity
2-6 October 2017	Genoa, Italy	30 <sup>th</sup> Meeting
23-27 October 2018	Wellington, NZ	31 <sup>st</sup> Meeting
5-9 August 2019	Kuala Lumpur, Malaysia	32 <sup>nd</sup> Meeting
Tbc	Buenos Aires, Argentina	33 <sup>rd</sup> Meeting

Chair: Hyun-chul Han

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Secretary: Yves Guillam

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## 1.1. IHO-IOC GEBCO Technical Sub-Committee on Ocean Mapping (TSCOM) Work Plan 2020-2021

### 1.1 TSCOM Tasks

- B Ensure conduct of TSCOM meeting in 2020 (IHO Task 3.6.1)
- C Ensure effective operation of IHO DCDB (IHO Task 3.6.2)
- D Develop and maintain tools to facilitate the contribution of bathymetric data to the IHO DCDB (IHO Task 3.6.3)
- E Maintain IHO bathymetric publications (IHO Task 3.6.6) including: B-4, B-9, B-10 and B-11
- F Develop the on-line function of B-4 (Information concerning recent bathymetric data) (IHO Task 3.6.6)
- G Support SCOPE in its outreach and education about ocean mapping (IHO Task 3.6.7) by development and dissemination of IHO-IOC GEBCO products such as the Global Gridded Product and Printed World Map
- H Ensure IHO-IOC GEBCO Web site is kept current and updated regularly (IHO Task 3.6.8)
- K Provide technical support, advice, and review to Seabed 2030 Project Director, RDACCs and GDACC
- L Provide support and advice to developing and validating emerging technologies for compiling and disseminating bathymetry

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
B	Ensure conduct of TSCOM meeting	H	Report of TSCOM meeting to GGC	2020	2020	P	Chair TSCOM			
C	Ensure effective operation of IHO DCDB	H	Conduct review	Continuous		O	Director DCDB			
D1	Document dataflow processes	H	Cookbook instructional chapter	Continuous		O	Chair TSCOM Director DCDB Director Seabed 2030			
D3	Conduct DCDB Industry Day and Data Contribution Workshop	H	Conduct workshop	2020	2020	P	Chair TSCOM Director DCDB		30,000	25,000





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
F	Develop, review, and maintain the on-line function of B-4	M	Conduct review	Continuous		O	Director DCDB			
H3	Review, Update and Maintain IHO-IOC GEBCO and Seabed 2030 Websites	M	Update website with meeting documents	2019	2020	P	BODC		5,000	5,000
			Validate members and contact information for SCRUM, TSCOM, and SCOPE	2019	2020	P	Chairs TSCOM, SCRUM, SCOPE			
			Review and maintain all working links	2019	2020	P	Chair TSCOM, BODC			
			Provide technical and content review of both websites	2019	2020	P	Chairs TSCOM, SCRUM, SCOPE			
K1	Support Seabed 2030	H	Provide scientific expertise and outreach	2018	2030	O	Chair TSCOM,			
K2	Travel to assist gathering technical needs from RDACCs and GDACC	H	Attend RMCs for RDACCs	2019	2020	O	Chair TSCOM		12,000	4,000

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
K3	Provide oversight and review of Seabed 2030 web services, methodologies and applications in accordance with TSCOM ToRs	H	Conduct regular reviews and participate in technical meetings	2019	2020	P	Chair TSCOM			
L1	Develop template for seafloor mapping route optimization application	H	Conduct requirements survey  Prototype and document web app	2019	2020	P	Chair TSCOM		20,000	15,000

## 1.2 TSCOM Meetings (IHO Task 3.6.1 refers)

Date	Location	Activity
1-4 October 2012	IHB, Monaco	XXVIII <sup>th</sup> Meeting
7&9 October 2013	Venice, Italy	XXIX <sup>th</sup> Meeting
11-13 December 2014	Mountain View, California, USA	XXX <sup>th</sup> Meeting
5-7 October 2015	Kuala Lumpur, Malaysia	XXXI <sup>th</sup> Meeting
10-12 October 2016	Viña del Mar, Chile	XXXII <sup>th</sup> Meeting
13-14 November 2017	Busan, Korea	XXXIV <sup>th</sup> Meeting
5-6 November 2018	Canberra, Australia	XXXV <sup>th</sup> Meeting
4-5 November 2019	Portsmouth, NH, USA	XXXVI <sup>th</sup> Meeting
November 2020	tbc	XXXVII <sup>th</sup> Meeting

Chair: Thierry Schmitt  
Vice-Chair: Caitlyn Raines  
Secretary: David Wyatt

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# 1.1. IHO-IOC GEBCO Sub-Committee for Regional Undersea Mapping (SCRUM) Work Plan 2020-2021

## 1.1 SCRUM Tasks

B	Ensure conduct of SCRUM meeting in 2019 (IHO Task 3.6.1)
D	Encourage the contribution of bathymetric data to the IHO DCDB (IHO Task 3.6.3), identify priority areas for regional mapping and promote data contribution through GEBCO participation in IHO/IOC Regional Meetings
E	Maintain IHO bathymetric publications (IHO Task 3.6.6) including: B-4, B-9, B-10 and B-11
H	Ensure IHO-IOC GEBCO Web site is kept current and updated regularly (IHO Task 3.6.8)
K	Provide scientific support and advice to Seabed 2030 Project Director, RDACCs and GDACC

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
B	Ensure conduct of annual SCRUM meeting	H	Report of SCRUM meeting to GGC	2020	2020	P	Chair SCRUM			
D1	Encourage the contribution of bathymetric data to the IHO DCDB	H		Continuous		O	All members of GEBCO GC through the Chair			
D2	Identify priority areas for regional mapping and support the organization of regional mapping projects.	H		Continuous		O	Chair SCRUM			
D3	Promote data contribution through GEBCO participation in RHCs and IOC regional meetings	H	Identify GEBCO colleagues who are able to attend meetings in 2019 – 2020	Continuous		O	All members of GEBCO GC through the Chair		15,000	10,000
D4	Promote data contribution by supporting participation at Regional Mapping Meetings	H	Provide partial support, as needed, for individuals to participate in regional mapping meetings	Continuous		P	Chair SCRUM		40,000	22,000

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
D5	Develop material to highlight activities and initiatives including up to date GEBCO slide deck	H		Continuous		P	Chair SCRUM in coordination with Chair SCOPE and with input from Seabed 2030 Project Team		10,000	8,000
D6	Develop communication messages for IHO & IOC to facilitate increasing the support of coastal states to provide and release data from within their waters of national jurisdiction.  Gather input from regarding stakeholder needs via regional engagement	H		2019  2019	2020  2020	P  P	All members of GGC through the Chair*  All members of GGC through the Chair*			
D7	Work with Seabed 2030 GDACC to develop metrics of completeness for RHCs	H		2019	2020	P	GDACC through the Chair*			
D8	Work with Seabed 2030 RDACCs and GDACC to ensure that reasons for embargo and/or no public access are captured and articulated to IHO/IOC	H		2019	2020	P	RDACCs and GDACC through Chair*			
D9	Gather input about IBC status and plans	H		2019	2020	P	SCRUM through Chair			

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
E	Maintain IHO bathymetric publications	M	Update GEBCO global 30 arc-second grid with new compilations	Continuous	Continuous	O	All members of GEBCO GC through the Chair			
		H	Update GEBCO World Map to included updated versions of GEBCO grid and adopted undersea feature names from SCUFN.	2016	2020	O	Chair SCRUM			
		M		2017	2020	O	Chairs SCRUM/SCUFN	B-4 - Information concerning recent bathymetric data		
		L						B-9 - GEBCO digital atlas		
		M						B-6 – Standardization of undersea feature names B-8 - Gazetteer B-9 - GEBCO digital atlas  B-10 - The history of GEBCO		
		M		Continuous	Continuous	O		B-11 - GEBCO Cookbook		

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
H	Review and Update IHO-IOC GEBCO and Seabed 2030 Websites	M	Update website with meeting documents and information pertaining to SCRUM activities	Continuous		P	BODC			
			Validate members and contact information for SCRUM, TSCOM, and SCOPE	Continuous		P	Chairs SCRUM, TSCOM, SCOPE			
			Review and maintain all working links	Continuous		P	Chair SCRUM, BODC			
K	Support SB2030 RDACCs	H	Provide scientific expertise, regional connections and outreach support	2018	2030	P	Chairs of TSCOM, SCRUM SCUFN, Outreach WG	To support participation in Seabed 2030 regional mapping meetings		

## 1.2 SCRUM Meetings (IHO Task 3.6.1 refers)

Date	Location	Activity
7&9 October 2013	Venice, Italy	1 <sup>st</sup> Meeting
11-13 December 2014	Mountain View, California, USA	2 <sup>nd</sup> Meeting
5-7 October 2015	Kuala Lumpur, Malaysia	3 <sup>rd</sup> Meeting
10-12 October 2016	Viña del Mar, Chile	4 <sup>th</sup> Meeting
13-14 November 2017	Busan, Korea	5 <sup>th</sup> Meeting
5-6 November 2018	Canberra, Australia	6 <sup>th</sup> Meeting
4-5 November 2019	Portsmouth, NH, USA	7 <sup>th</sup> Meeting
November	tbc	8 <sup>th</sup> Meeting

Chair: Vicki Ferrini  
Vice-Chair: Aileen Bohan  
Secretary: David Wyatt

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## IHO-IOC GEBCO SCOPE Work Plan 2020-2021

## 1.1 SCOPE Tasks

- G Contribute to outreach and education about ocean mapping (IHO Task 3.6.7) by development of outreach and educational materials and printing of IHO-IOC GEBCO World Map
- 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 3.6.9)

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	<b>Development of SCOPE webpage</b>	H		2018	2021	O	Chair of SCOPE		0	
	-Content design and development					O	David Millar, Karen Marks *Eunmi Chang Hyo Hyun Sung Jennifer Jenks		0	
	-Web page design					O	Eunmi Chang		0	
	-Web page coding					O	Eunmi Chang		0	
	-Developing & integrating the contents to the main page of GEBCO					O	Eunmi Chang Pauline Weatherall		2,000 (2020) 2,000 (2021)	2,000
	Organize and run GEBCO 'Map the Gaps' symposium	H		2019	2020	O	Symposium conveners		0	25,000
G2	<b>Communication Strategies</b>	H		2019	2021	O	Chair of SCOPE		0	

	-Communication Strategies			2019	2021	O	David Millar/ Eunmi Chang		0	
	Development of promotional materials based on communication strategy			2020	2025	P	1,000 for 4 target group respectively each year		4,000 (2020) 4,000 (2021)	4,000
G3	<b>PPT materials with proper content and PR activities</b>	H		2019	2025		Chair of SCOPE		0	
	-Development of online characters to produce posters for kids			2019	2025	P			2,000 (2020) 2,000 (2021)	2,000
	Using Social Media			2020	2025	P	Sara Saeans		2,000 (2020) 2,000 (2021)	2,000
	Paper Puzzle & GEBCO signboard			2020	2025	P	Vicki Ferrini		2,000 (2020) 2,000 (2021)	2,000
G5	External Relations and Communications	H	Draft and update strategy plan	2019	2020	P	Eunmi Chang		2,000 (2021)	
	Attending scientific conferences			2019	2025		Chair and Vice Chair		3,000 (2020) 5,000 (2021)	
	Support organization and running Map the Gaps symposium					O	Map the Gaps symposium convener		25,000 (2020) 25,000(2021)	

## 1.2 GGC Meetings (IHO Task 3.6.1 refers)

Date	Location	Activity
7-11 October 2013	Venice, Italy	1 <sup>st</sup> Meeting



13-15 June 2014	IHB, Monaco	2 <sup>nd</sup> Meeting
5-9 October 2015	Kuala Lumpur, Malaysia	3 <sup>rd</sup> Meeting
10-11 October 2016	Viña del Mar, Chile	4 <sup>th</sup> Meeting
13-14 November 2017	Busan, Korea	5 <sup>th</sup> Meeting
5-6 November 2018	Canberra, Australia	6 <sup>th</sup> Meeting
4-5 November 2019	Portsmouth, NH, USA	1 <sup>st</sup> Meeting
November 2020	tbc	2 <sup>nd</sup> Meeting

Chair: Hyo Hyun Sung	Email: <a href="mailto:hhsung@ewha.ac.kr">hhsung@ewha.ac.kr</a>
Co-Vice-Chair: Dr. Eunmi Chang	Email: <a href="mailto:emchang21@gmail.com">emchang21@gmail.com</a>
Co-Vice-Chair: Mr. Timothy Kearns	Email: <a href="mailto:tim@oceirin.ca">tim@oceirin.ca</a>
Secretary: David Wyatt	Email: <a href="mailto:adso@iho.int">adso@iho.int</a>

## 1.1. IHO-IOC GEBCO Guiding Committee (GGC) Work Plan 2020-2021

### 1.1 GGC Tasks

- A Organise and conduct GGC XXXV meeting in 2018 (IHO Task 3.6.1)
- B Ensure conduct of TSCOM, SCRUM and SCUFN meetings in 2018 (IHO Tasks 3.6.1)
- C Ensure effective operation of IHO DCDB (IHO Task 3.6.2)
- D Encourage the contribution of bathymetric data to the IHO DCDB (IHO Task 3.6.3), identify priority areas for regional mapping (IHO Task 3.6.3) and promote data contribution through GEBCO participation in IHO/IOC Regional meetings (IHO Task 3.6.3)
- E Maintain IHO bathymetric publications (IHO Task 3.6.6) including: B-4, B-6, B-8, B-9, B-10 and B-411
- F Develop the on-line function of B-4 (Information concerning recent bathymetric data) (IHO Task 3.6.2)
- G Contribute to outreach and education about ocean mapping (IHO Task 3.6.7) by development of outreach and educational materials (IHO Task 3.6.7) and printing of IHO-IOC GEBCO World Map (IHO Task 3.6.7)
- H Ensuring IHO-IOC GEBCO Web site is kept current and updated regularly (IHO Task 3.6.8)
- 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 3.6.9)
- J Update and enhance the GEBCO Gazetteer (B-8) for internet access (IHO Task 3.6.10) including providing the GEBCO Gazetteer as a web service via a geospatially enabled database (IHO Task 3.6.10), develop and make available public and management on-line interfaces to the Gazetteer (IHO Task 3.6.10) and develop the integration of undersea feature concepts in the S-100 framework
- K Liaise with and provide support to Seabed2030 project (IHO Task 3.6.5)
- L Provide support and advice to developing and validating emerging technologies for compiling and disseminating bathymetry

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 (€)	Approved Funding (€)
A	Organise and conduct GGC XXXVII meeting	H		2020	2020	P	Chair GGC Sec		0	0
B1	Ensure conduct of TSCOM, SCRUM, SCOPE and SCUFN meetings	H		2020	2020	P	Chair GGC, Chair, TSCOM, Chair SCRUM, Chair SCOPE and Chair SCUFN		0	0

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 (€)	Approved Funding (€)
B2	Oversee work of subordinate bodies – TSCOM, SCRUM, SCUFN and Outreach WG – for completion of directed tasks	H		Continuous	Continuous	O	Chair GGC		0	0
C	Ensure effective operation of IHO DCDB	H		Continuous		O	Director DCDB		0	0
D1	Encourage the contribution of bathymetric data to the IHO DCDB	H		Continuous		O	All members of GEBCO GC through the Chair		0	0
	Document data flow processes	H	B-11 instructional chapter	Continuous		O	Chair TSCOM, Director DCDB, Director Seabed 2030			
D2	Identify priority areas for regional mapping and support the organization of regional mapping projects.	H		Continuous		O	Chair SCRUM		0	0
	Conduct DCDB Industry Day and Data Contribution Workshop	H	Conduct Workshop	2020	2020	P	Chair TSCOM, Director DCDB		25,000	25,000
D3	Promote data contribution through GEBCO participation in RHCs and IOC regional meetings	H	Identify GEBCO people who are able to attend for meetings in 2019 – 2020	Continuous		O	All members of GEBCO GC through the Chair		15,000	10,000

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 (€)	Approved Funding (€)
D4	Organize regional mapping meetings/workshops	H		Continuous		O	Chair SCRUM		0	0
	Promote data contribution by supporting participation at Regional Mapping Meetings	H	Provide partial support, as necessary, for individuals to participate in regional mapping meetings	Continuous		P	Chair SCRUM		40,000	22,000
D5	Develop material to highlight activities and initiatives including up to date GEBCO slide deck	H		Continuous		P	Chair SCRUM in coordination with Chair SCOPE and with input from Seabed 2030		10,000	8,000

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 (€)	Approved Funding (€)
E1	Maintain IHO bathymetric publications	M	Update GEBCO global 30 arc-second grid with new compilations	Continuous	Continuous	O	All members of GEBCO GC through the Chair	B-4 - Information concerning recent bathymetric data	0	0
		M		2016	<del>2017</del> 2019	O	Chair SCRUM	B-9 - GEBCO digital atlas	0	0
		M	Update GEBCO World Map to included updated versions of GEBCO grid and adopted undersea feature names from SCUFN.	2017	<del>2018</del> 2021	O	Chairs SCRUM/SCUFN	B-6 – Standardization of undersea feature names B-8 - Gazetteer B-9 - GEBCO digital atlas	0 0 0	0 0 0
		L						B-10 - The history of GEBCO	0	0
		M						B-11 - GEBCO Cookbook	0	0

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 (€)	Approved Funding (€)
E2	Add and update instructive chapters in IHO-IOC GEBCO Cook Book	H	Maintain B-11	Continuous		O	Chair TSCOM Chair, Cookbook Working Group	B-11 GEBCO Cookbook		
			2019 B-11 update	2018	2019	C				
			Add section related to Seabed 2030	2019	2020	O				
			Investigate e-Publication format for B-11	2019	2020	P			4,000	0
			Seek instructive chapters on contributing data, metadata requirements, platforms for viewing gaps and coverage, CSB, etc.	2019	2020	O				
			Request the GGC to endorse the proposal to convert B-11 into an e-Publication format	2019	2020	P				

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 (€)	Approved Funding (€)
F	Develop and review the on-line function of B-4	M	Conduct review	2015	On going		Director DCDB		0	0
G1	Contribute to outreach and education about ocean mapping	H		Continuous		O	Chairs TSCOM, SCRUM and SCOPE		2,000 (2020) 2,000 (2021)	2,000
	Organize and run GEBCO 'Map the Gaps' symposium	H		2019	2020	O	Symposium conveners		0	25,000
G2	Development of outreach and educational materials (jigsaw puzzle for World Map and presentation files)	H		2015	2018	P	All members of GEBCO GC through the Chair SCOPE		3,000 (2020) 3,000 (2021)	4,000
G3		H	PPT material with updated content and PR activities	2019	2025	O	Chair SCOPE			
			Development of story board	2019	2025	O	David Millar, Karen Marks, Eunmi Chang, Hyo Hyun Sung, Jennifer Jencks		2,000 (2020) 2,000 (2021)	3,000
			Promotional activities such as participation in conferences and fora	2020	2025	P	SCOPE members		2,000 (2020) 2,000 (2021)	3,000
G4	Development of webpage (for secondary school student etc.)	M		2015	2018/2020	O	All members of GEBCO GC through the Chair SCOPE		2,000	0

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 (€)	Approved Funding (€)
G5	Developing a communication strategy and resources in GEBCO outreach ( ex-Poster or video for each target)	H	Draft strategy plan	2018	2020	O	All members of GEBCO GC through the Chair SCOPE	See OWG WP 2019-2020	0	5,000
H1	Ensuring IHO-IOC GEBCO and Seabed 2030 Web sites are kept current and updated regularly	M	Complete individual tasks	Continuous		O	BODC, Chairs TSCOM/SCRUM/SCOPE		5,000	5,000
H3	Review and Update IHO-IOC GEBCO and Seabed 20230 Websites	M	Update website with meeting documents	2019	2020	P	BODC		5,000	5,000
			Validate members and contact information for SCRUM, TSCOM, and SCOPE	2019	2020	P	Chairs TSCOM, SCRUM, SCOPE			
			Review and maintain all working links	2019	2020	P	Chair TSCOM, BODC			
			Provide technical and content review of both websites	2019	2020	P	Chairs TSCOM, SCRUM, SCOPE			
I	Develop short course and supporting material on compiling digital bathymetric models	H		2019	2021	P	All members of GEBCO GC through the Chair SCOPE		0	0



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 (€)	Approved Funding (€)
J1	Update and enhance the GEBCO Gazetteer (B-8) for internet access	H		Annual	Annual	O	Chair SCUFN	B-8 – Gazetteer	15,000 /year	Funded out of IHO Operational funds
J2	Maintain the GEBCO Gazetteer as a web service via a geospatially enabled database	H		2016	Permanent	O	Chair SCUFN Director DCDB	B-8 – Gazetteer	(See Doc. SCUFN32-07.1B). Funding for correcting and basic maintenance agreed by US. Need to keep it maintained.	
J3	Develop and make available public and management on-line interfaces to the Gazetteer	M		2014	<del>2018</del> 2022	O	Chair SCUFN KHOA	B-8 - Gazetteer Management Plan	0	0
J4	Develop a S-100-based product specification for Undersea Feature Names	M / L		2015	2019	O	Chair Project Team (Anna Hendi)	S-100, B-6 Harmonized definitions of generic terms across B-6, S-32, IHO GI Registry	0	0
J5	Upgrade the quality of the geometry of major existing undersea features in the Gazetteer which are known as being inaccurate and ambiguous	M	10 features/ SCUFN member per year	2017	Permanent	P	SCUFN Members	B-8 Gazetteer	0	0

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 (€)	Approved Funding (€)
K1	Support Seabed2030	H	Provide scientific expertise, regional connections and outreach	2018	2030	PO	Chairs TSCOM, SCRUM, SCOPE, SCUFN	See TSCOM and SCRUM WPs 2019-2020	0	0
K2	Travel to assist gathering technical needs from RDACCs and GDACC	H	Attend RMCs for RDACCs	2019	2020	O	Chair TSCOM		4,000	4,000
K3	Provide oversight and review of Seabed 2030 web services, methodologies and applications in accordance with TSCOM ToRs	H	Conduct regular reviews and participate in technical meetings	2019	2020	P	Chair TSCOM			
L1	Develop template for seafloor mapping route optimization application	H	Conduct requirements survey  Prototype and document web app	2019	2020	P	Chair TSCOM		15,000	15,000

## 1.2 GGC Meetings (IHO Task 3.8.1.1 refers)

Date	Location	Activity
1-4 October 2012	IHB, Monaco	XXIX <sup>th</sup> Meeting
7-11 October 2013	Venice, Italy	XXX <sup>th</sup> Meeting
13-15 June 2014	IHB, Monaco	XXXI <sup>th</sup> Meeting

5-9 October 2015	Kuala Lumpur, Malaysia	XXXII <sup>th</sup> Meeting
10-14 October 2016	Valparaíso, Chile	XXXIII <sup>th</sup> Meeting
13-17 November 2017	Busan, Korea	XXXIV <sup>th</sup> Meeting
5-9 November 2017	Canberra, Australia	XXXV <sup>th</sup> Meeting
7-8 November 2019	Portsmouth, NH, USA	XXXVI <sup>th</sup> Meeting
November 2020	tbc	XXXVII <sup>th</sup> Meeting

Chair: Shin Tina  
Vice-Chair: Martin Jakobsson  
Secretary: David Wyatt

Email: [soarhigh@mac.com](mailto:soarhigh@mac.com)  
Email: [Martin.Jakobsson@geo.su.se](mailto:Martin.Jakobsson@geo.su.se)  
Email: [adso@iho.int](mailto:adso@iho.int)

Requester	Task	Proposer Priority	Status	Deliverable/activity	Amount (euros)	Note	Consensus Allocation	GGC Allocated in 2019	Expenditure in 2019
SCUFN	J1	H	O	Update B8 - Gazetteer	15,000		15,000	0	16,140
SCUFN	J2	H	O	Web Service for Gazetteer	43,000	Funded by US	0	0	0
<b>SCUFN sub-total</b>					<b>58,000</b>		<b>15,000</b>	<b>0</b>	<b>16,140</b>
TSCOM	D2	H	P	Conduct DCDB Industry Day and Data Contribution Workshop	30,000		25,000		
TSCOM	D3	H	O	Promote data contribution through GEBCO participation in RHCs and IOC regional meetings	15,000		0		
TSCOM	E2	H	P	Investigate e-Publication format for B-11	4,000		0		
TSCOM	K	M	O	Travel to assist gathering technical needs from RDACCs and GDACC	12,000		4,000	5,000	0
				Prototype cloud-deployed infrastructure for integrating distributed regional data contributions	40,000		0		
TSCOM	L	H	O	Develop template for seafloor mapping route optimization app	20,000		15,000	10,000	0
TSCOM	H1	M	O	Maintaining GEBCO website	5,000		5,000	5,000	0
<b>TSCOM sub-total</b>					<b>126,000</b>		<b>49,000</b>	<b>20,000</b>	<b>0</b>
SCRUM	D3	H	O	Attendance at RHCs and IOC regional meetings	15,000	To include GEBCO representation at meetings	10,000	10,000	1,589.09
SCRUM	D4	H	P	Participation in Seabed 2030 regional mapping meetings	40,000	To be for discrete items	22,000	30,000	4,027.70
SCRUM	D5	H	O	Develop material to highlight activities and initiatives	10,000		8,000	10,000	0
<b>SCRUM sub-total</b>					<b>65,000</b>		<b>40,000</b>	<b>50,000</b>	<b>1,589</b>
SCOPE	G1	H	O	Web page development	2,000		2,000		
SCOPE	G2	M	P	Developing a communication strategy and resources	4,000		4,000	0	0
SCOPE	G3	H	P	Development of outreach material	8,000		6,000	0	0
SCOPE	G5	H	P	External Relations and Communications activities	5,000	To include representation at meetings	3,000		
SCOPE	I	H	P	Development of training short course on building maps	0	tbc	0	0	0
SCOPE		H	O	Support organization and running Map the Gaps symposium	0	Recommend an allocation	25,000	20,000	20,000
<b>SCOPE sub-total</b>					<b>19,000</b>		<b>40,000</b>	<b>20,000</b>	<b>20,000</b>
GGC	B2	H	O	Oversee subordinate body work.	0		0	0	0
GGC	E	M	O	Maintain IHO Publications	0		0	0	0
GGC		M	P	Fundraising consultant	0				
<b>GGC sub-total</b>					<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL</b>				<b>Total subordinate body bids for 2019</b>	<b>268,000</b>	<b>TOTAL GGC allocated for 2019</b>	<b>144,000</b>	<b>90,000</b>	<b>37,729</b>

Balance 31 October 2019	94,525
Projected 2020 income	46,500
IOC biennial allocation for Outreach and Communications activities	20,000
Maximum to allocate	161,025

**GENERAL BATHYMETRIC CHART OF THE OCEAN (GEBCO) PROJECT –  
TERMS OF REFERENCE AND RULES OF PROCEDURE FOR  
THE JOINT IHO-IOC GEBCO GUIDING COMMITTEE**

(Adopted by the IOC on 4 July 2019 and the IHO on 5 June 2019)

**PREAMBLE**

GEBCO was proposed in 1899 and became a reality in April 1903 when HSH Prince Albert I of Monaco offered to organize and finance the production of a new chart series designated: “The General Bathymetric Chart of the Oceans” (GEBCO), under the Prince’s Scientific Cabinet. In 1922 the responsibility for GEBCO was passed to the Director of the Oceanographic Museum of Monaco and in 1929 was transferred to the International Hydrographic Bureau (today the IHO). Since 1973, GEBCO has been a joint Project of the International Hydrographic Organization (IHO) and the Intergovernmental Oceanographic Commission (IOC) of UNESCO.

The goals of the IHO-IOC GEBCO Project are to:

1. Develop and constantly improve the portrayal of global ocean depths;
2. Act as the designated international authority for undersea feature names;
3. Advance the development and application of sea floor mapping technology;
4. Encourage and facilitate ocean mapping cooperation leading to the exchange and preservation of bathymetric data and associated metadata;
5. Foster collaboration among individuals and organizations with established and developing expertise so as to assist local and regional mapping efforts to attain a global standard of quality;
6. Identify oceanic areas that are insufficiently mapped and recommend to appropriate ocean-going organizations and institutions that such areas are surveyed;
7. Promote education and training in ocean mapping through high level courses in Ocean Bathymetry acknowledged by the IHO and IOC;
8. Bring together the ocean mapping community and users of bathymetry thereby leading to products that are more widely used.

GEBCO is an IHO and IOC Project that is open to all those interested in mapping the ocean floor. It relies largely on the voluntary efforts of an international collaborating community of scientists and hydrographers with the support of the IHO and the IOC.

GEBCO is led by the Joint IHO-IOC GEBCO Guiding Committee.

**Terms of Reference**

The GEBCO Guiding Committee shall:

- 1.1 Guide the IHO-IOC GEBCO Project, under the general governance of IHO and IOC while recognising and following IHO and IOC policies.
- 1.2 Prepare and disseminate maps, grids, data files and other appropriate depictions of the ocean floor.
- 1.3 Identify the needs of the various user communities of the bathymetry of the world’s oceans; study the ways and means whereby these needs can be met.
- 1.4 Identify the necessary resources, both human and financial, for its undertakings and make appropriate recommendations to its parent organizations.
- 1.5 Stimulate the flow of data relevant to the GEBCO Project by actively identifying sources of new data and encouraging and promoting the release of data to appropriate data banks, with the objective of ensuring that maximum available data are provided to the IHO Data Centre for Digital Bathymetry (DCDB).

- 1.6 Supervise the development, maintenance and routine updating of GEBCO products. Activities are to include but are not restricted to:
  - (1) Study and set out procedures for new compilations of bathymetry.
  - (2) Develop standards and methodologies for the production of bathymetric maps and grids and recommend their adoption to the IHO and IOC and to the seafloor mapping community.
  - (3) Supervise the development, production and updating of a worldwide grid of digital bathymetric data.
  - (4) Supervise the preparation and maintenance, in association with national and international bodies, of an authoritative IHO/IOC GEBCO Gazetteer of Undersea Feature Names.
  - (5) Study and implement the best distribution mechanism for the effective use of GEBCO products by all users.
- 1.7 Investigate and develop appropriate logistical and financial arrangements necessary for the furtherance of the GEBCO Project, recognising and taking into account the relevant IHO and IOC policies, and seeking the assistance of the Secretariats of the IHO and IOC as appropriate.
- 1.8 Integrate into its products the geographical names of undersea features that appear in the IHO-IOC GEBCO Gazetteer of Undersea Feature Names.
- 1.9 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. The GEBCO Guiding Committee will report annually and intersessionally if necessary, to the IHO and IOC for endorsement on the status of subordinate bodies and encompass their comments before establishing, reviewing, modifying, and/or terminating subordinate bodies; actions which must be included as GGC agenda items to allow sufficient prior consideration by the IHO and IOC secretariats and member states.
- 1.10 Direct and monitor the work of its subordinate bodies.
- 1.11 Engage with regional mapping projects to encourage their compatibility with, and eventual inclusion in, GEBCO products.
- 1.12 Build capacity by encouraging and enabling the training and scientific education of new generations of ocean mapping operational experts worldwide.
- 1.13 Pursue, in dialogue with the IHO and IOC, policies that facilitate the suitability of GEBCO products not only for scientific users but also, where appropriate, for educational and socio-economic purposes in the broadest sense.
- 1.14 Take all practical opportunities to advocate the scientific and societal benefits of mapping the seafloor.
- 1.15 Report annually to the IHO and to the IOC, through their respective governing bodies and should also propose activities to be considered in the IHO's and IOC's work programmes, identifying and requesting, where necessary, the required funding support.
- 1.16 Prepare an annual GEBCO Work Plan and budget and propose it to each meeting of the IHO and IOC, through their respective governing bodies. The Guiding Committee should consider and submit to the IHO and IOC governing bodies proposals for new work items under the GEBCO Work Plan, taking into account the financial, administrative and wider stakeholder consequences.
- 1.17 Monitor the execution of the GEBCO Work Plan and receive reports from its Subordinate Bodies, including an evaluation of performance and progress achieved against agreed objectives.

## **Rules of Procedure**

### **1. Membership**

- 1.1 The Committee shall consist of five Members appointed by the IHO, and five Members appointed by the IOC. The Secretariats of the IHO and IOC, in close consultation with the Committee Chair, will

seek to strive that all appointed Members are, as far as possible, from different regions so as to achieve a balanced and diverse representation.

- 1.2 Appointed Members shall serve for a term of five years, renewable by a majority recommendation of the Committee for one additional five-year term and with the approval of the corresponding parent organization. The Chair shall inform the relevant parent organization of any foreseeable vacancy in a timely manner.
- 1.3 The Chairs of GEBCO Sub-Committees established under Article 9 of the Terms of Reference and the Director of the IHO Data Centre for Digital Bathymetry (DCDB), shall also be voting Members of the Committee. If a Member of the Committee mentioned under paragraphs 1.1 and 1.2 above is also the Chair of a subordinate body, that Member shall have only one vote on the Committee.
- 1.4 Representatives of the Secretariats of the IHO and IOC shall be permanent Observers in the Committee. The Secretariats of the IHO and IOC will also be recognised as permanent Observers in all subordinate bodies established by the Committee.
- 1.5 The Committee may invite other suitably qualified individuals to take part in specific meetings as Expert Contributors.
- 1.6 Members of the Guiding Committee serve as experts<sup>1</sup> in their personal capacity rather than as representatives of their organization and/or country.
- 1.7 Members are expected to attend every meeting of the Committee. Members who are absent for two consecutive meetings will normally be considered to have resigned and new nominations shall be sought. No substitution shall be allowed at meetings.
- 1.8 Business may be conducted between meetings by appropriate communication systems.
- 1.9 All documents related to meetings and decisions of the Committee and Sub-Committees and other relevant documents will be posted on the GEBCO web site linked to the IHO and IOC web sites.

## **2. Office Bearers**

- 2.1 The Chair and Vice-Chair shall be elected by the Committee from the voting Members of the Committee and normally should be from different parent organizations. The Chair and Vice-Chair are each elected for a three-year term, but not exceeding their current membership of the Committee. They can be re-elected for one additional term by the Committee. The Chair shall conduct the business of the Committee. If the Chair is unable to carry out the duties of the office, the Vice-Chair shall assume the Chair with the same powers and duties.
- 2.2 The Committee shall appoint a Secretary for a five-year term which can be renewed by the Committee. If resources permit and at the Committee's request, a secretary may be provided by either the Secretariat of the IHO or the IOC. The function of the Secretary shall be defined by the Guiding Committee.

## **3. Meetings**

- 3.1 Representatives from Member States of IHO and IOC may participate as observers in Committee meetings.
- 3.2 Meetings shall be held at least every two years. The venue and date of the next meeting will normally be decided at the previous meeting, in order to facilitate participants' travel arrangements.
- 3.3 The quorum to hold a meeting shall be two more than half of the voting Members of the Committee.
- 3.4 An extraordinary meeting can be called by the Chair or any Committee Member, with the agreement of the simple majority of all voting members of the Committee.
- 3.5 The working language of the Committee shall be English.

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<sup>1</sup> So far as IOC is concerned, the Guiding Committee is classed as a Joint Group of Experts under the IOC guidelines for subsidiary bodies.

- 3.6 The Committee shall strive to make decisions by consensus. If consensus cannot be reached, decisions shall be taken by simple majority vote of the Members entitled to vote. The Chair shall have the casting vote if there is a tie.

**4. Amendment and Revision**

- 4.1 These Terms of Reference and Rules of Procedure shall be endorsed and approved by the IHO and IOC according to their current procedures. The Committee may propose to IHO and IOC changes to these Terms of Reference and Rules of Procedure with the approval of two thirds of the Committee. Any changes shall enter in force after being endorsed and approved by both IHO and IOC.



## SEABED 2030 YEAR 3 WORK PLAN

Work stream	Deliverable Page	Deliverable ID	Deliverable	Deliverable Lead
<b>1. DATA</b>				
	Year 3 D1.1.1.	D1.1.1	GEBCO 2020 is published	Helen Snaith
	Year 3 D1.2.1.	D1.2.1	IBCAO 2019 is published IBCAO 2019 is published	Martin Jakobsson
	Year 3 D1.3.1.	D1.3.1	IBCSO V2 2019 is published	Boris Dorschel
	Year 3 D1.4.1.	D1.4.1	Increase data contributions from non-research sources	Director
<b>2. SYSTEMS &amp; TOOLS</b>				
	Year 3 D2.1.1.	D2.1.1	Version 1 of protocols for contributing data are published and used	Vicki Ferrini
	Year 3 D2.2.1.	D2.2.1	Publish a Data Submission Process for external use	Geoffroy Lamarche
	Year 3 D2.3.1.	D2.3.1	Seabed 2030 Centers are exchanging data to agreed process and formats	Geoffroy Lamarche
	Year 3 D2.4.1.	D2.4.1	Prototype of next gen GEBCO product developed for evaluation by end of Year 3	Helen Snaith
	Year 3 D2.5.1.	D2.5.1	Website provides user tools	Helen Snaith
	Year 3 D2.6.1.	D2.6.1	Website contains interactive map of gaps	Helen Snaith
<b>3. TECHNOLOGY INNOVATION</b>				
	Year 3 D3.1.1.	D3.1.1	A published Seabed 2030 Technology Innovation strategy document	Director
			<i>Possible technology innovation projects in support of Vision to Action 3 initiatives?</i>	
<b>4. MAPPING THE GAPS</b>				
	Year 3 D4.1.1.	D4.1.1	Implement the Seabed 2030 Funding Strategy - increase in Seabed 2030 funding income	Director
	Year 3 D4.2.1.	D4.2.1	Extending the Mapping of Ocean Frontiers initiative: Catalogue of data contributions through Ryder Expedition – Proof of Concept	Martin Jakobsson
	Year 3 D4.3.1.	D4.3.1	Significant increase in crowd sourced data submissions	Jennifer Jencks
			<i>Possible crowd sourcing projects in support of Vision to Action 3 initiatives?</i>	
			<i>Possible Mapping Ocean Frontiers projects in support of Vision to Action 3 initiatives?</i>	

## SEABED 2030 YEAR 3 WORK PLAN

Work stream	Deliverable Page	Deliverable ID	Deliverable	Deliverable Lead
<b>5. MANAGEMENT</b>				
<b>5.1 OPERATIONAL MANAGEMENT</b>				
	Year 3 D5.1.1.	D5.1.1	Year 4 Work Plan and budget approved	Director
	Year 3 D5.1.2.	D5.1.2	Year 3 finance ledger is accurate & Project run to budget	Director
	Year 3 D5.1.3.	D5.1.3	Year 3 Annual Report submitted to GGC	Director
	Year 3 D5.1.4.	D5.1.4	Status reports submitted to GGC	Director
	Year 3 D5.1.5.	D5.1.5	Sponsors meetings held as required	Director
	Year 3 D5.1.6.	D5.1.6	Diary of Year 3 engagement demonstrating GEBCO contribution to Seabed 2030	Vicki Ferrini
	Year 3 D5.1.7.	D5.1.7	Recruit a Project Administrator	Director
		D5.1.8	Convene the Seabed 2030 Strategic Advisory Group	Director
		D5.1.9	Convene the Seabed 2030 Review Panel	Director
<b>5.2 STRATEGIC DIRECTION</b>				
	Year 3 D5.2.1.	D5.2.1	GEBCO product users are active in Seabed 2030	Director
	Year 3 D5.2.2.	D5.2.2	Strategy of Seabed 2030 is improved by input of external advice	Director
	Year 3 D5.2.3.	D5.2.3	Seabed 2030 is acknowledged as a key global initiative	Director
	Year 3 D5.2.4.	D5.2.4	Partners make significant contribution to Seabed 2030 success	Director
<b>5.3 COMMUNICATIONS</b>				
	Year 3 D5.3.0.	D5.3.0	Publish Seabed 2030 Brand Guidelines. The colors and fonts to be used in all Seabed 2030 material	Vicki Ferrini
	Year 3 D5.3.1.	D5.3.1	Publish media content (news articles, press releases) - Catalogue of content	Director
	Year 3 D5.3.2.	D5.3.2	Promote Seabed 2030 at external events and meetings - Catalogue of events and meetings attended	Vicki Ferrini
	Year 3 D5.3.3.	D5.3.3	Promote Seabed 2030 through the website & social media - New content is published on website	Helen Snaith
	Year 3 D5.3.4.	D5.3.4	Acknowledge partner contributions - Seabed 2030 website	Helen Snaith
	Year 3 D5.3.5.	D5.3.5	Royal Society event is a success	Director
<b>5.4 CAPACITY DEVELOPMENT</b>				
	Year 3 D5.4.1.	D5.4.1	Document: A strategy for GEBCO-NF alumni contribution to Seabed 2030	Director

## IHO-IOC GEBCO GUIDING COMMITTEE (GGC)

### List of GGC members – 9 November 2019

- |  |                     |
|--|---------------------|
| <b>1. IHO Appointed Members:</b>                               | <b>Term Period:</b> |
| Mr Shin Tani (Japan) ( <i>Chair</i> )                          | (2018-2023)         |
| Dr Graham Allen (United Kingdom)                               | (2015-2020)         |
| Mr David Millar (USA)  | (2018-2023)         |
| Mr Evert Flier (Norway)  | (2019-2024)         |
| Captain Rodrigo de Souza Obino (Brazil)                        | (2019-2024)         |
| <b>2. IOC Appointed Members:</b>                               |                     |
| Dr Marzia Rovere (Italy)*                                      | (2019-2024)         |
| Dr Johnathan Kool (Australia)                                  | (2016-2021)         |
| Captain Leonid Shalnov (Russian Federation)                    | (2016-2021)         |
| Dr Martin Jakobsson (Sweden) ( <i>Vice-chair</i> )             | (2018-2023)         |
| Lieutenant Dr Karolina Zwolak (Poland)                         | (2018-2023)         |
| <b>3. Ex-officio Members:</b>                                  |                     |
| Dr Vicki Ferrini (USA) ( <i>Chair of SCRUM</i> )               |                     |
| Mr Thierry Schmitt (France) ( <i>Chair of TSCOM</i> )          |                     |
| Mr Hyun-Chul Han (Republic of Korea) ( <i>Chair of SCUFN</i> ) |                     |
| Dr Hyo Hyun Sung (Republic of Korea) ( <i>Chair of SCOPE</i> ) |                     |
| Ms Jennifer Jencks (USA) ( <i>Director of IHO-DCDB</i> )       |                     |
| * Members serving a second 5-year term.                        |                     |
| <b>4. Secretary:</b>   |                     |
| Mr David Wyatt (IHO)   | (2015-2019)         |

**NOTE:** Members of the Secretariats of the IHO and IOC are permanent non-voting Members in the Committee.

# G E B C O

## GENERAL BATHYMETRIC CHART OF THE OCEANS



### Thirty Seventh Meeting of the GEBCO Guiding Committee (GGC37)

??, ??

? – ? November 2020

#### Agenda

#### 1 OPENING REMARKS AND ADMINISTRATIVE ARRANGEMENTS – 30 minutes

- .1 Opening Remarks and Introductions – **Chair**
- .2 Welcoming Remarks by Host – **UNH**
- .3 Opening remarks by parent bodies – **IHO and IOC Secretariats**
- .4 Working Arrangements – **Secretary/Hosts**
- .5 Administrative Arrangements – **Secretary/Hosts**
- .6 Adoption of the Agenda and approval of report from GGC36 – **Chair**
- .7 Review of Action Items from GGC36 – **Secretary**
- .8 Report from IRCC12 and IOC EC 53 – **Chair**

#### 2 REPORTS FROM PARENTAL AND SUBORDINATE BODIES – 180 minutes

Brief reports (5 minutes) will be received, highlighting only significant events, achievements, engagement with IHO/IOC regional bodies, outcomes, outputs/deliverables and matters requiring GGC action, full reports can be downloaded from the GGC website:

- .1 IHO update – **??**
- .2 IOC update – **Barbière**
- .3 Financial update, including funds status report – **Secretary**
- .4 Digital Atlas Manager – **BODC**
- .5 DCDB update, including relevant CSBWG and ASMIWG issues – **DCDB Director**
- .6 SCUFN – **Chair SCUFN**
- .7 TSCOM – **Chair TSCOM**
- .8 SCRUM – **Chair SCRUM**
- .9 SCOPE – **Chair SCOPE**
- .10 NF related activities and programmes – **Chair NFPMC/Course Manager**

#### 3 DOCUMENTS AND PUBLICATIONS – 15 minutes

- .1 Document Review Status – **Chair/Secretary**

Title	IHO Number	IOC Number	Edition/date
<i>Standardization of undersea feature names</i>	B-6	-	Edition 4.1.0 September 2013; new Edition 4.2.0 in preparation
<i>Gazetteer</i>	B-8	-	V1.1.1
<i>GEBCO digital atlas</i>	B-9	-	08 Grid March 2015
<i>The history of GEBCO</i>	B10	-	April 2003
<i>GEBCO Cookbook</i>	B-11	Manuals and Guides 63	September 2018

- .2 ToRs and RoPs review, to include annual check of GGC ToRs and approval of any proposed amendments to subordinate body ToRs – **Chair/Secretary**

#### **4 SEABED 2030 – 240 minutes**

Progress brief on activities of Seabed 2030 Project against agreed Business Plan, including funding state, RDACC and GDACC activities, outcomes from interaction with IOC and IHO Secretariats and endorsement of Work Plan 2021-2022:

- .1 Present Year 3 report and budget for GGC approval, highlighting main deliverables and communications – **Project Director**  
 .2 Funding strategy update – **Millar**  
 .3 Presentation of draft Year 4 Work plan and proposed funding bid – **Project Director**

#### **5 GEBCO COMMUNICATIONS AND OUTREACH STRATEGY – 60 minutes**

- .1 Review of GEBCO Communications, Education and Outreach activities – **Chair SCOPE**  
 .2 Development of future strategy and activities – **Chair SCOPE**

#### **6 GEBCO WORK PLANS AND FUNDING**

##### **.1 GGC Subordinate bodies' Work Plans 2021-2022 – 60 minutes**

- .1 Approve funding requests and Work Plans of Subordinate bodies, including outputs/deliverables for next period – **Chair/Secretary**

Chairs will present draft funding requests and Work Plans for their Sub-Committee or Working Group; identifying outputs, deliverables and appropriate milestones for consideration and approval of the GGC.

- .1 SCUFN – **Chair SCUFN**;  
 .2 TSCOM – **Chair TSCOM**;  
 .3 SCRUM – **Chair SCRUM**; and  
 .4 SCOPE – **Chair SCOPE**

##### **.2 GGC Work Plan 2021-2022 – 60 minutes**

- .1 Approve GGC funding requests and Work Plans including outputs/deliverables for next period – **Chair/Secretary**

**7 SECRETARY RESPONSIBILITIES – 15 minutes**

- .1 Confirm responsibilities – **Chair**

**8 GGC MEMBERSHIP – 30 minutes**

- .1 Identification of individuals, whose terms are due to complete within the next two years – **Secretary**
- .2 Details of nominations to fill vacancies – **Chair/Secretary**

**9 ELECTIONS – 15 minutes**

- .1 Election of Chair and Vice-Chair for triennium 2021-2023 – **Secretary**

**10 NEXT MEETING – 15 minutes**

- .1 Dates and venue for GGC38 – **Secretary**
- .2 Draft Agenda for GGC38 – **Secretary**

**11 ANY OTHER BUSINESS – Chair/Secretary – 30 minutes**

**12 Review of Action Items from GGC37 – Secretary – 30 minutes**

**13 CLOSURE OF THE MEETING – Chair – 15 minutes**