



22nd July 2019

Mr Yohei Sasakawa,
The Chairman,
The Nippon Foundation,
1-2-2 Akasaka, Minato-ku,
Tokyo, Japan

Dear Mr Sasakawa,

On behalf of GEBCO, I submit the proposal for Year 3 of The Nippon Foundation – GEBCO Seabed 2030 Project for your consideration.

Yours sincerely

A handwritten signature in blue ink that reads 'G. L. Allen'. The signature is written in a cursive, slightly slanted style.

Dr Graham L Allen
Acting Project Director



NIPPON FOUNDATION-GEBCO SEABED 2030 PROJECT

YEAR 3 Programme of Work
APPLICATION to The Nippon Foundation

Submitted by
Acting PROJECT DIRECTOR, Dr Graham Allen
22nd July 2019



Figure 1: “It is crucially important that the maritime community comes together to achieve this important goal.” -- Yohei Sasakawa, Tokyo, Feb 20, 2018.



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1. EXECUTIVE SUMMARY

This is the application from The Nippon Foundation GEBCO Seabed 2030 Project (Seabed 2030) to The Nippon Foundation for funding to complete YEAR 3 of the project: 1st August 2019 to 31st July 2020. The proposed activities are structured into 5 Work Packages consistent with the original Nippon Foundation-endorsed Seabed 2030 10 Year Business Plan.

The budget is broadly consistent with the year 3 budget as proposed in the Seabed 2030 10 Year Business Plan, with some modest changes that reflect joint Nippon Foundation – Seabed 2030 decisions, namely inclusion of 2 positions: Deputy Director and Project Support and the inclusion of the major media event: Vision to Action at the Royal Society, London in October, 2019.

The total amount of funds requested for Year 3 is US\$2,346,170



2. PROGRAMME OF WORK

The Programme of Work (POW) is presented as a summary table in Appendix I. The Year 3 activities are structured into 5 Work Packages (WP).

2.1. WP 1: Data

This WP is concerned with the continued ingestion of data into the GEBCO Ocean Map and the publication of the next version of the product: GEBCO 2020. Two key regional maps will also be published: International Bathymetric Chart of the Arctic Ocean (IBCAO) 2019 and International Bathymetric Chart of the Southern Ocean (IBCSO) V2 2019. Both regional maps will be incorporated into GEBCO. In Year 3, the Project team will make increased effort to solicit data from beyond the traditional academic research community.

2.2. WP 2: System and Tools

This WP is concerned with the technical tools, systems and processes required to build and publish the GEBCO Ocean Map. To facilitate non-experts to contribute data to Seabed 2030, the Project Team will develop and implement a suite of easy-to-use standards, templates and tools. As future mapping activities are planned, Seabed 2030 will provide tools to support expedition planning and maximize the data collection – we don't want expeditions mapping where data already exists! A data visualization tool is a key deliverable of Year 3. Seabed 2030 will continue to enhance the suite of user tools and applications to support usage.

Moving the GEBCO product from a grid that has the same size everywhere in the ocean (ie a fixed resolution grid) to a grid size that is smaller in the coastal, shallow seas and larger in the open deep ocean (ie a multi-resolution grid) is a complex technical challenge. Work on the design of the next-generation which began in Year 2 will continue in Year 3. In Year 3 Seabed 2030 will produce a prototype version of the next generation GEBCO Ocean Map.

2.3. WP 3: Technology innovation

A central strategy of Seabed 2030 is to accelerate the rate of bathymetric data collection by the accelerated application of technology innovations across the full life cycle of bathymetric data



(from data collection, to processing and to product creation). Progress on this WP was limited in Year 2, by the absence of a full time Project Director. In Year 3, Seabed 2030 will develop a strategy of how the project can accelerate and harness the value of technology innovation. Identifying a suitable partner to lead the technology innovation WP will continue and the Technology Workshop (held in conjunction with the Vision to Action event at the Royal Society) will contribute to this WP.

2.4. WP 4: Mapping the gaps

To achieve the Seabed 2030 vision will require the global mapping community to significantly increase the rate of mapping and bathymetric data collection activity. The increased volumes of data to process will also need to be addressed. Seabed 2030 will develop a strategy on how Seabed 2030 will contribute to the need to accelerate rates of bathymetric data processing. In Year 2, Seabed 2030 developed a strategy to inspire increased funding of mapping and how to secure increased core funding to expand the Regional and Global Center activities. In Year 3, Seabed 2030 will begin to implement the Funding Strategy.

Seabed 2030 will also seek to increase data collection rates by:

- Mapping the Remote Gaps initiative: identify opportunities for augmenting already-planned expeditions to remote areas with extra mapping days and secure further financial support to fund the extra mapping days and funding multi-beam operators on multi-beam sonar-equipped vessels that are transiting but would not standardly operate the sonar. Strategic expeditions will be supported to ensure research expeditions to remote locations are able to collect the bathymetric data.
- Crowd sourcing: working closely with IHO crowd sourcing working group and IHO-DCDB.

2.5. WP 5: Management

This WP will deliver the operational and strategic management aspects of the project.

2.5.1. WP 5.1 Operational management

Seabed 2030 funds will continue to be managed through the IHO Secretariat bank account. The Seabed 2030 Director will be responsible for financial management, project status reporting to The Nippon Foundation, The GEBCO Guiding Committee (GGC) and Seabed 2030 Sponsors. A deliverable of Year 3 is the approval of the Year 4 project budget.



2.5.2. WP 5.2 Strategic direction

To be successful, Seabed 2030 needs to be acknowledged as the global focus for bathymetric mapping and a key contributor to the seafloor mapping aspirations of the UN Decade of Ocean Science for Sustainable Development and other activities in support of achieving UN Sustainable Development Goal 14 – Life below water. Seabed 2030 will continue to position itself as the coordinator and facilitator of global ocean mapping. Significant effort will be expended by Seabed 2030 to engage with the Decade planning process and to position itself strategically within the UN Decade framework to ensure we play a full role in the Decade.

Seabed 2030 will greatly benefit from greater involvement of GEBCO product users. User input is required to ensure the products Seabed 2030 deliver meet user needs. Building a community of committed users also provides a compelling voice that advocates and champions the Seabed 2030 vision. Seabed 2030 will continue to connect with users and solicit greater involvement in the project.

A Seabed 2030 strategy is to achieve the vision in partnership with the broader mapping and marine community. Seabed 2030 will continue to expand the community of strategic partners and we will activate the Seabed 2030 Strategic Advisory Group as a conduit for external and independent strategic advice on the project. The Strategic Advisory Group will be useful to the new Director as they require guidance and ongoing advice as they transition into the position.

2.5.3. WP 5.3 Communication

Promotion of Seabed 2030, raising awareness and connecting with potential data contributors and strategic partners will continue to be a major activity throughout Year 3. Attendance at impactful meetings and events, publishing articles, social media and engagement with traditional (print and on-line) media will be the core of the communication activities. The Vision to Action event at the Royal Society, London, will be the major Seabed 2030 media event of Year 3.

2.5.4. WP 5.4 Capacity development

The GEBCO-NF Alumni community constitutes a valuable resource and capacity base. Seabed 2030 will explore with the Alumni how Seabed 2030 and the Alumni can work together to achieve the Seabed 2030 vision.

3. BUDGET NARRATIVE



3.1. Centers

The budget in Appendix II is presented in the same format as in the 10 Year Business Plan. All 5 Center budgets are based on Year 2 budgets with an adjustment for inflation. Note: While the 10 Year Business Plan included a year-on-year 2% increase to reflect inflation, the Year 2 budget did NOT adjust for inflation. Hence, the Year 3 budget has applied 2 years of inflation increase to Year 2 budgets. The salary component of the Center budgets is approximately equivalent to 11 Full Time Equivalent positions, but due to significant part-time funding of Seabed 2030 activities, the number of actual staff working on Seabed 2030 across all Centers will be 35.

3.2. Vision to Action

The budget for the Vision to Action Media event at the Royal Society, London, is included as a separate budget item, with a total of US\$131,000

3.3. Project Team

The Project Team budget includes salaries for: Director, deputy Director and administrative support. The Year 1 budget only included a Director. The Year 2 budget included none of these positions or costs, but a temporary project coordinator position was approved mid-year by The Nippon Foundation to support the part-time acting Director. The budget for Director in Year 3 has been adjusted to align with advice from Hays International (consultants for Director's recruitment) and the salary level used during the recruitment process in April-May 2019. Hence, including these salaries has increased the total annual project budget compared to the Year 3 budget in the 10 Year Business Plan.

Project Team activities (activities that are not Center-specific or undertaken by Director or deputy Director) constitute the second component of the Project Team budget. These include: travel, meetings and communication activities. These amounts are based on inflation-adjusted values in the 10 Year Business Plan.



4. APPENDIX I – YEAR 3 BUDGET DETAILS

See separate word document: The Nippon Foundation - GEBCO Seabed 2030 Year 3 Budget APPENDIX I V1.5.1

5. APPENDIX II – PROGRAMME OF WORK SUMMARY

See separate word document: The Nippon Foundation - GEBCO Seabed 2030 Year 3 POW Appendix II V1.5.1

Seabed 2030 Year 3 Budget APPENDIX I

Project Team			US (\$)
Project Team	Salary	Director	150,000
Project Team	Fringe benefits	Director	45,000
Project Team	Salary	Deputy Director	50,000
Project Team	Fringe benefit+Overhead	Deputy Director	65,000
Project Team	Salary	Admin support	61,320
Project Team	Fringe benefit+Overhead	Admin support	79,716
Project Team - Salary	Salary	sub-total	451,036
Project Team	Activity	Travel	25,927
Project Team	Activity	Meetings	29,131
Project Team	Activity	Strategic Advisory Panel meetings	12,000
Project Team	Activity	Comms and Outreach	124,848
Project Team	Activity	Director Operational support costs	53,000
Project Team - Activity	Activity	sub-total	244,906
Project Team TOTAL		Total	695,942
Regional Center 1 - Salary	Salary	sub-total	205,999
Regional Center 1 - Activity	Activity	sub-total	56,182
Regional Center 1		Total	262,181
Regional Center 2 - Salary	Salary	sub-total	205,999
Regional Center 2 - Activity	Activity	sub-total	56,182
Regional Center 2		Total	262,181
Regional Center 3 - Salary	Salary	sub-total	205,999
Regional Center 3 - Activity	Activity	sub-total	56,182
Regional Center 3		Total	262,181
Regional Center 4 - Salary	Salary	sub-total	205,999
Regional Center 4 - Activity	Activity	sub-total	56,182
Regional Center 4		Total	262,181
Global Center - Salary	Salary	sub-total	228,888

Global Center - Activity	Activity	sub-total	41,616
Global Center		Total	270,504
Annual Seabed 2030 budget			2,015,170
Royal Society: Vision to Action			131,000
Mapping the Gaps			200,000
Grand Total (Year 3 + Vision to Action + Mapping the Gaps)			2,346,170

Seabed 2030 Year 3 Work Plan

WP 1: Data	TASK ID	TASK	Deliverable ID	Deliverable/outcome	Deliverable Lead
WP 1: Data	TASK 1.1	Publish Data Product – GEBCO 2020	D1.1.1	GEBCO 2020 is published by 31 st March 2020	Helen Snaith
WP 1: Data	TASK 1.2	Publish Data Product - IBCAO 2019	D1.2.1	IBCAO 2019 is published by 31 st August 2019	Martin Jakobsson
WP 1: Data	TASK 1.3	Publish Data Products - IBCSO V2 2019	D1.3.1	IBCSO V2 2019 is published by 30 th September 2019	Boris Dorschel
WP 1: Data	TASK 1.4	Secure data contributions from different communities	D1.4.1	Increased data contributions from non-research communities	Regional Centers
WP 2: Systems and tools	TASK ID	TASK	Deliverable ID	Deliverable/outcome	Deliverable Lead
WP 2: System and Tools	TASK 2.1	Define the standards for data and metadata contributions	D2.1.1	Version 1 of protocols for contributing data are published and used	Vicki Ferrini
WP 2: System and Tools	TASK 2.2	Implement agreed process and formats for data contributions	D2.2.1	Publish a Data Submission Process for external use	Geoffroy Lamarche
WP 2: System and Tools	TASK 2.3	Implement agreed process and formats for data exchange between Seabed 2030 Centers	D2.3.1	Seabed 2030 Centers are exchanging data to agreed process and formats	Geoffroy Lamarche
WP 2: System and Tools	TASK 2.4	Develop the concept of the next generation GEBCO Product	D2.4.1	Prototype of next gen GEBCO product developed for evaluation by end of Year 3	Helen Snaith
WP 2: System and Tools	TASK 2.5	Enhanced data access and visualization tools	D2.5.1	Website provides user tools	Helen Snaith
WP 2: System and Tools	TASK 2.6	Publish map of gaps and data coverage	D2.6.1	Website contains interactive map of gaps	Helen Snaith
WP 3: Technology innovation	TASK ID	TASK	Deliverable ID	Deliverable/outcome	Deliverable Lead
WP 3: Technology innovation	TASK 3.1	Establish a Seabed 2030 Technology Innovation strategy	D3.1.1	A published Seabed 2030 Technology Innovation strategy document	Director
WP 4: Mapping the gaps	TASK ID	TASK	Deliverable ID	Deliverable/outcome	Deliverable Lead
WP 4: Mapping the gaps	TASK 4.1	Implement the Seabed 2030 Funding Strategy	D4.1.1	Increase in Seabed 2030 funding income	Director
WP 4: Mapping the gaps	TASK 4.2	Progress Mapping the Remote Gaps	D4.2.1	Catalogue of data contributions through Map the Remote Gaps initiative	Martin Jakobsson
WP 4: Mapping the gaps	TASK 4.3	Progress crowdsourcing approach	D4.3.1	Significant increase in crowd sourced data submissions	Jennifer Jencks
WP 5: Management	TASK ID	TASK	Deliverable ID	Deliverable/outcome	Deliverable Lead
5.1 Operational management	TASK 5.1.1	Secure Year 4 Funding	D5.1.1	Year 4 Work Plan and budget approved	Director
5.1 Operational management	TASK 5.1.2	Year 3 Financial Management	D5.1.2	Year 3 finance ledger is accurate & Project run to budget	Director
5.1 Operational management	TASK 5.1.3	Annual Project Reporting to GGC	D5.1.3	Year 3 Annual Report submitted to GGC	Director
5.1 Operational management	TASK 5.1.4	Quarterly Project Reporting to GGC	D5.1.4	Status reports submitted to GGC	Director
5.1 Operational management	TASK 5.1.5	Project Reporting to Sponsors	D5.1.5	Sponsors meetings held as required	Director
5.1 Operational management	TASK 5.1.6	Engage with the GEBCO community	D5.1.6	Diary of Year 3 engagement demonstrating GEBCO contribution to Seabed 2030	Vicki Ferrini
5.2 Strategic direction	TASK 5.2.1	Engage with users of GEBCO products	D5.2.1	GEBCO product users are active in Seabed 2030	Director
5.2 Strategic direction	TASK 5.2.2	Solicit external strategic input	D5.2.2	Strategy of Seabed 2030 is improved by input of external advice	Director
5.2 Strategic direction	TASK 5.2.3	Position Seabed 2030 globally	D5.2.3	Seabed 2030 is acknowledged as a key global initiative	Director
5.3 Strategic direction	TASK 5.3.4	Build strong partnerships	D5.3.4	Partners make significant contribution to Seabed 2030 success	Director
5.3 Communication	TASK 5.3.1	Publish media content (news articles, press releases)	D5.3.1	Catalogue of content	Director
5.3 Communication	TASK 5.3.2	Promote Seabed 2030 at external events and meetings	D5.3.2	Catalogue of events and meetings attended	Vicki Ferrini
5.3 Communication	TASK 5.3.3	Promote Seabed 2030 through the website & social media	D5.3.6	New content is published on website	Helen Snaith
5.3 Communication	TASK 5.3.4	Acknowledge partner contributions	D5.3.5	Seabed 2030 website	Helen Snaith
5.3 Communication	TASK 5.3.5	Hold Seabed 2030 meetings	D5.3.3	Royal Society event is a success	Director
5.4 Capacity development	TASK 5.4.1	Develop how to involve GEBCO-NF alumni in Seabed 2030	D5.4.1	Document: A strategy for GEBCO-NF alumni contribution to Seabed 2030	Director

