

The Nippon Foundation-GEBCO

# Seabed 2030 Project

Year 1 Status Report V2.1

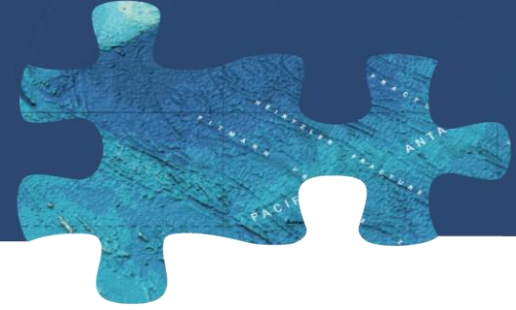
GGC35

15<sup>th</sup> November 2018

**Dr Graham Allen**



# Agenda



## **INFORMATION:**

- ✓ Scene setting
- ✓ Year 1 Achievements
- ✓ Lessons Learnt

## **DISCUSSION:**

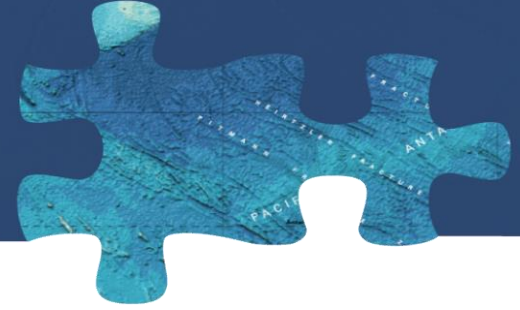
- ✓ GGC discussion & questions to Project Team

## **DECISION:**

- GGC decision to endorse Year 1 Annual Report

Year 1 (operational) = 1<sup>st</sup> February 2018 to 31<sup>st</sup> July 2018

# Introduction to me



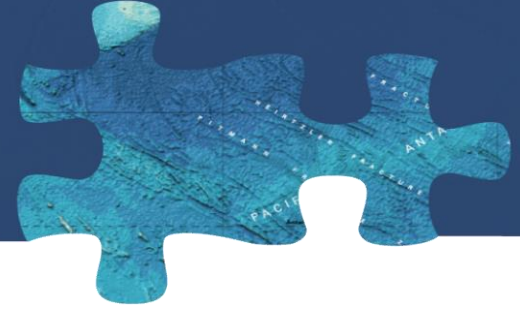
## I am:

- Acting Seabed 2030 Director
- GEBCO Guiding Committee member
- Seabed 2030 Establishment Team member
- Co-author of the Seabed 2030 foundational documents:
  - Seabed 2030 10 year Business Plan, Seabed 2030 Year 1 Funding Proposal, Seabed 2030 Road Map, Seabed 2030 Project Plan.
- Chief Information Officer (CIO), National Oceanography Centre, UK
- Head of the British Oceanographic Data Centre (BODC)

## I was:

- Physical Oceanographer, Software Development Manager in SaaS start ups, software developer (java, C, C++, Delphi, matlab, fortran, Haskell, mathematician,....

# Introduction...



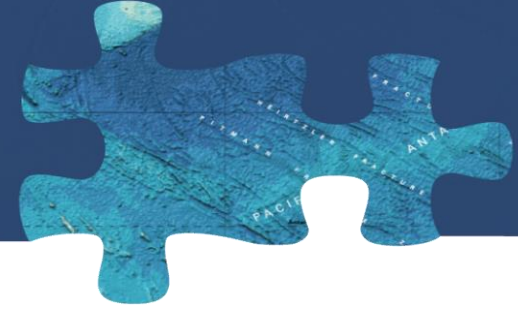
**I am not** (and never was):

- An ocean mapper

**I will be:**

- A fast cyclist!

One day ,..... In my dreams.....



## IHO appointed members

- Vice Admiral (ret) Shin Tani (Chair)
- Dr Graham Allen\*
- Rear Admiral Patricio Juan Carlos Carrasco Hellwig
- Mr David Millar
- Prof Hyo Hyun Sung

## IOC appointed members

- Prof Martin Jakobsson\* (Vice-Chair)
- Dr Robin K H Falconer
- Dr Johnathan T Kool
- Dr Marzia Rovere
- Captain Leonid Shalnov

## Ex-officio members

- Dr Karen M Marks
  - Chair of TSCOM
- Dr Vicki Ferrini\*
  - Chair of SCRUM
- Ms Jennifer Jencks
  - Director, IHO DCDB
- Dr Hans-Werner Schenke
  - Chair of SCUFN
- Mr David Wyatt
  - Permanent Secretary

Key:

Operational contribution

Establishment or management contribution

# GGC involvement in Seabed 2030



## Martin Jakobsson

- ✓ On Seabed 2030 Project Team
- ✓ On Director Recruitment Teams #1 & #2
- ✓ Establishment Team
- ✓ Attends Sponsors Meetings
- ✓ Co-author of 'foundational' document

## Vicki Ferrini

- ✓ On Seabed 2030 Project Team

## Graham Allen

- ✓ Head of BODC (= Global Center)
- ✓ On Director Recruitment Team #1
- ✓ Establishment Team
- ✓ Attends Sponsors Meetings
- ✓ Co-author of 'foundational' document
- ✓ Acting Director (not Year 1)

## Robin Falconer

- ✓ Co-author of 'foundational' document
- ✓ Establishment Team
- ✓ On Director Recruitment Teams #1 & #2
- ✓ Attends Sponsors Meeting (when he can)

## David Millar & Marzia Rovere

- ✓ On Director Recruitment Team #1 & #2
- ✓ Establishment Team

## David Wyatt

- ✓ Project Finance management
- ✓ Attends Sponsors Meetings

## Shin Tani

- ✓ Attends Sponsors Meetings

# Establishment Team

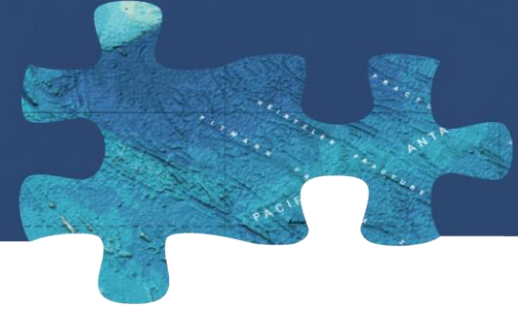


Given Name	Family Name	Organization	Country	
Graham	Allen	British Oceanographic Data Centre	United Kingdom	core
Robin	Falconer	Robin Falconer Associates Ltd	New Zealand	core
David	Heydon	Deep sea mining expert	Australia	
Martin	Jakobsson	Stockholm University	Sweden	core
Larry	Mayer	Center for Coastal and Ocean Mapping/Joint Hydrographic Center UNH	USA	
David	Millar	Fugro	USA	
Marzia	Rovere	Istituto di Scienze Marine - CNR	Italy	
Lisa	Taylor	National Centers for Environmental Information/NOAA	USA	

## Terms of Reference

- [Seabed 2030 Establishment Team Terms of Reference V2.1.docx](#)

# Names



The Nippon Foundation – GEBCO Seabed 2030 Project

Seabed 2030

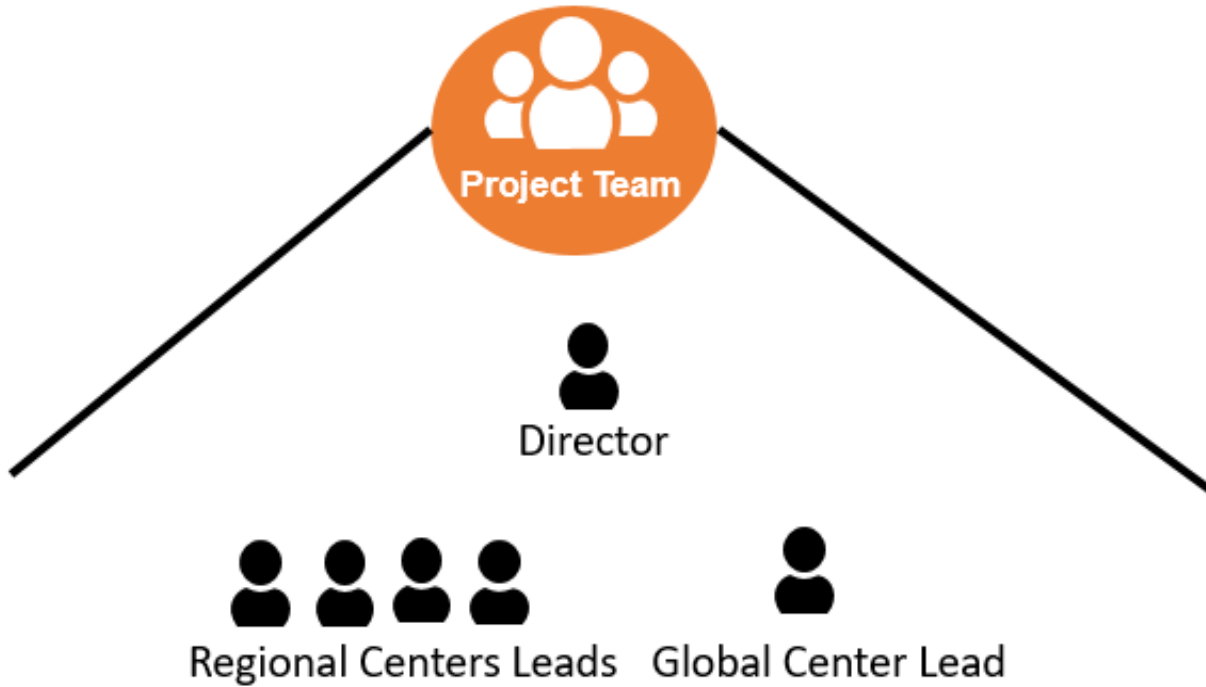
Regional Centers

Global Center

*RDACC and GDACC = too technical & arcane*



# Seabed 2030 Project Team



Year 1: Project Management

## Southern Ocean



Dr. Boris Dorschel

## Atlantic and Indian Oceans



Dr. Vicki Ferrini



Lamont-Doherty Earth Observatory  
COLUMBIA UNIVERSITY | EARTH INSTITUTE

# South and West Pacific Ocean



Dr. Geoffroy Lamarche

# Arctic and Northern Pacific Oceans



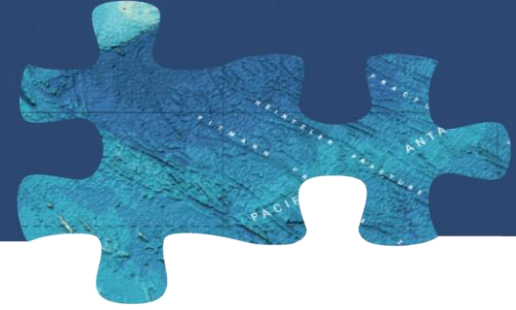
Dr. Martin Jakobsson



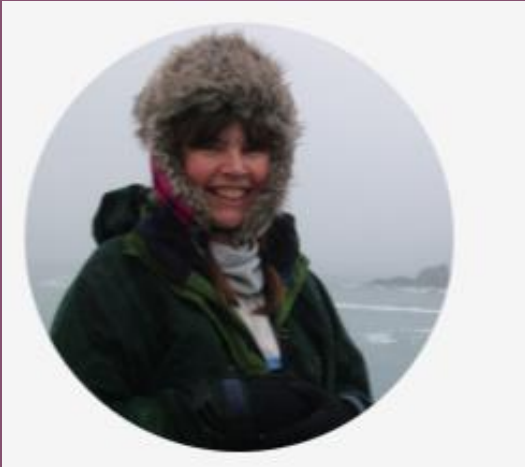
Dr. Larry Mayer



# Project Team



## Global Center



Dr. Helen Snaith



Pauline Weatherall  
GEBCO Digital Atlas Manager  
Vice-chair SCRUM



**British Oceanographic  
Data Centre**

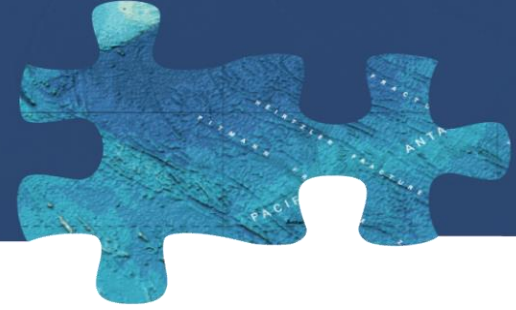
NATURAL ENVIRONMENT RESEARCH COUNCIL



**National  
Oceanography Centre**

NATURAL ENVIRONMENT RESEARCH COUNCIL

# Seabed 2030 Sponsors meeting



Vladimir Ryabinin  
Executive Secretary of  
IOC Secretariat

Mitsuyuki Unno  
Executive Director,  
The Nippon Foundation

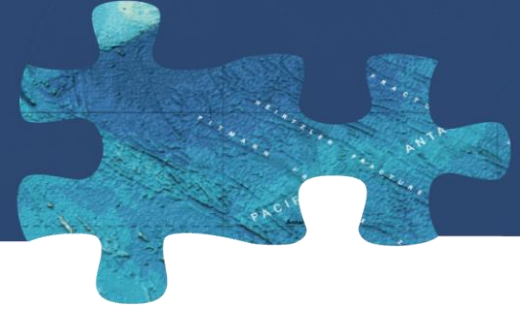
Mathias Jonas  
Secretary General of  
IHO Secretariat

Also:

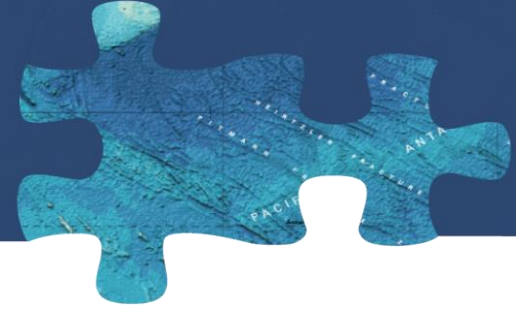
- Julian Barbieri (IOC Sec)
- David Wyatt (IHO Sec)
- Mustafa Iptes (IHO Sec)
- Martin Jakobsson (GGC)
- Mao Hasebe (NF)

# GEBCO

## - What is it?



# GEBCO is



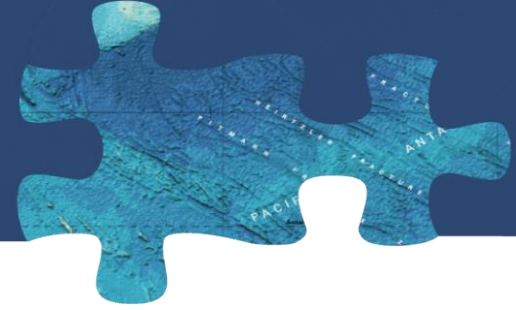
'... an open ended joint project of the IHO & IOC managed by the GEBCO Guiding Committee (GGC)'

' The **General Bathymetric Chart of the Ocean**'

'... largely a **voluntary** community of international **collaborating community** of **scientists** and **hydrographers** with the support of their parent organizations.'

'...aiming to provide the most authoritative, publicly-available bathymetric data sets of the world's oceans.'

# Seabed 2030 - What is it to do?



Finish the job that **GEBCO** *(the joint project)*

started in 1903, which is to deliver to the world

**GEBCO** *(the chart)*

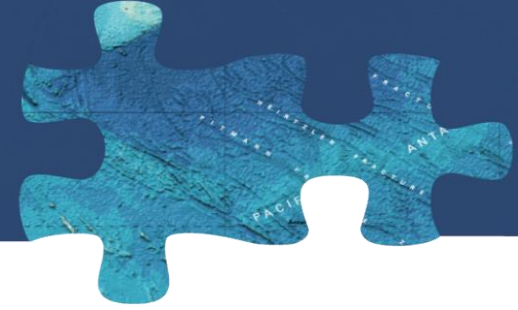
## **Finish GEBCO**

- ***Finish the GEBCO map***
- Finish the GEBCO chart
- Finish the GEBCO Grid

*Yes, they are all tautological.....and incorrect, but to the general public/non-expert the most appropriate*



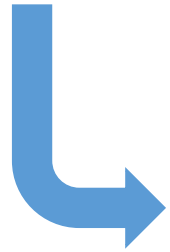
# Seabed 2030 *complete GEBCO*



June 2016



Mr Sasakawa, Chairman of The Nippon Foundation proposed ‘...to map 100% of the topography of the World Ocean by 2030’



June 2017

The Nippon Foundation -  
GEBCO Seabed 2030 Project  
announced



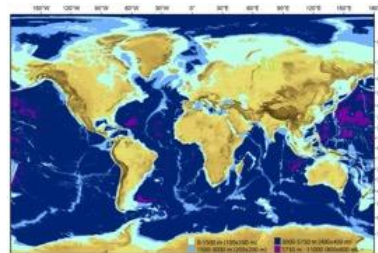
*Mr Sasakawa – 1 of 8 IOC-UNESCO  
“Champions of Global Ocean Science”*



SDG-14



Project Operational



1<sup>st</sup> February 2018



**2030**

**100% of GEBCO DONE**

# Agenda – 60 mins



## **INFORMATION:**

- ✓ Scene setting
- ✓ Year 1 Achievements
- ✓ Lessons Learnt

## **DISCUSSION:**

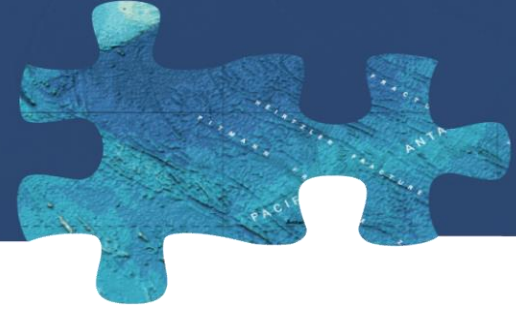
- ✓ GGC discussion & questions to Project Team

## **DECISION:**

- GGC decision to endorse Year 1 Annual Report

Year 1 (operational) = 1<sup>st</sup> February 2018 to 31<sup>st</sup> July 2018

# Project Strategy - Principles



Completing a high-resolution ocean map:

- ✓ Will make the World a better place
- ✓ Quick & low cost progress by including existing data collected but not yet available to GEBCO
- ✓ Is a Global community endeavour, best championed by GEBCO
- ✓ Requires technology innovation
- ✓ Requires funding of expeditions
- ✓ Requires funding of project & centers

# Project Strategy - Work Packages



## **WP 1: PUBLISHING THE GRID – DATA (SCRUM)**

- Focused on existing data not yet available to GEBCO
- Identifying where data exists and where data does not exist ('the gaps')

## **WP 2: TOOLS AND SYSTEMS DEVELOPMENT (TSCOM)**

- The tools and systems to deliver the new multi-resolution GEBCO products

## **WP 3: TECHNOLOGY INNOVATION**

- How to encourage/accelerate the required technical advances?

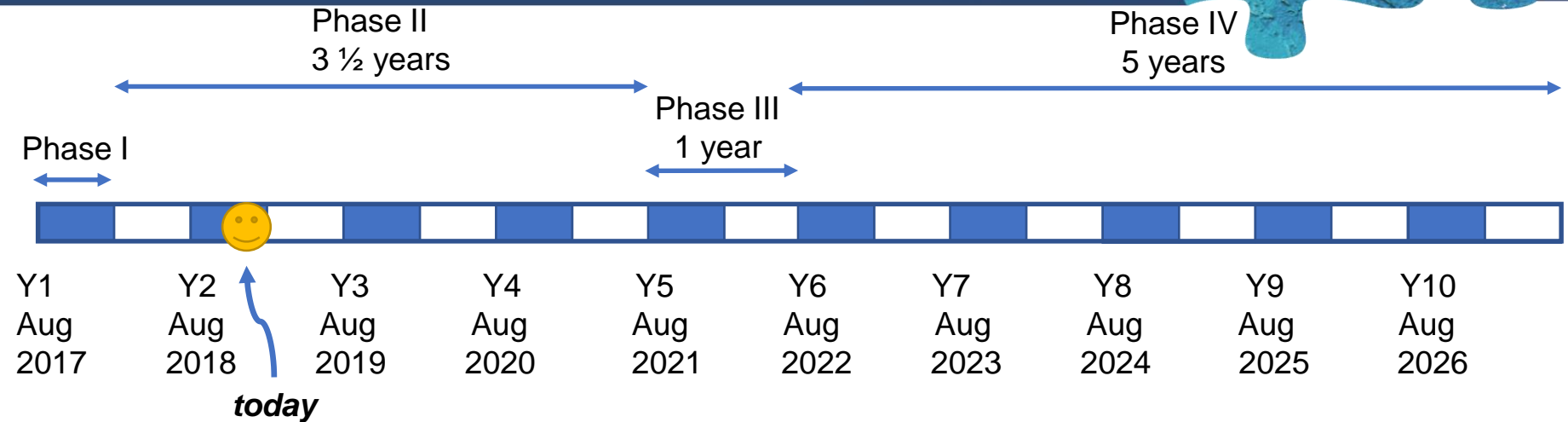
## **WP 4: MAP THE GAPS**

- How to champion/facilitate data collection in areas devoid of data?
- Funding expeditions?

## **WP 5: MANAGEMENT**

- Communication and outreach
- Human capacity development
- Operational management
- Strategic direction
- Funding raising

# Project Strategy – time line



## PHASE I - Establishment Phase

- Focus on WP5: management

## PHASE II - Publishing existing data

Focus:

- WP2 Tools and System
- WP1 Publish data
- Design WP3 Tech innovation
- Design WP 4 Map the gaps
- WP5: Tell the world about Seabed2030

## PHASE III - Start to map the gaps

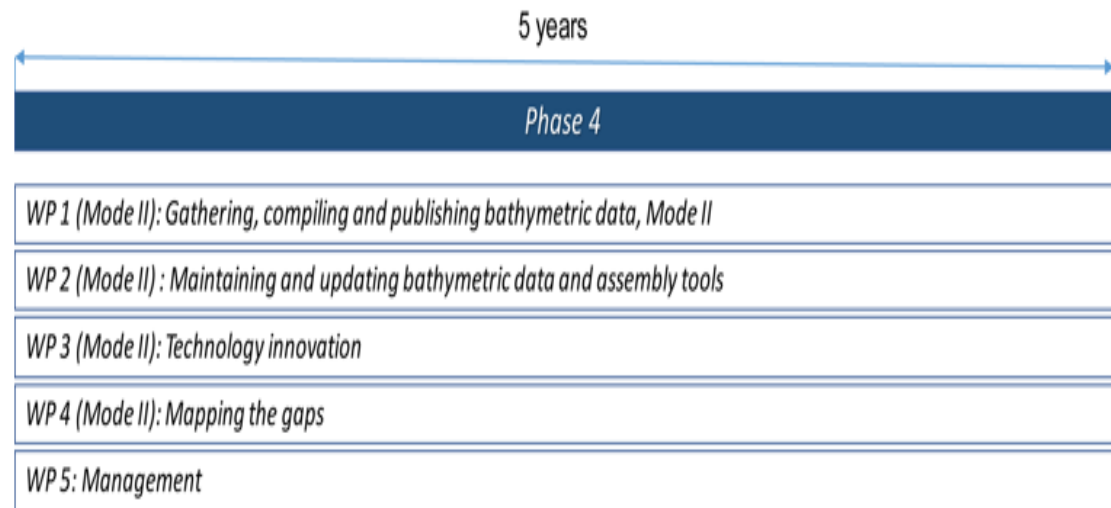
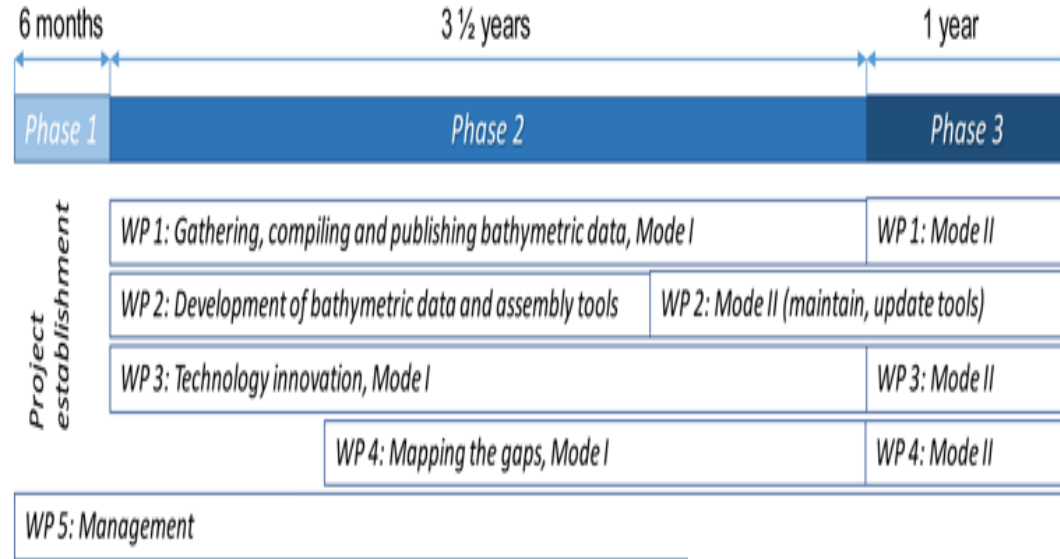
- Focus shifts to WP 4 Map the gaps
- WP1 Business as Usual

## PHASE IV – Leveraging tech innovation

Focus:

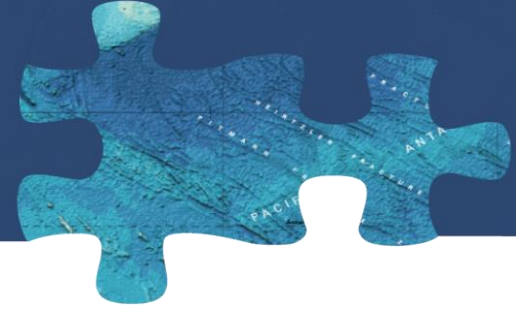
- WP 4 Map the gaps
- WP 3 Tech innovation
- WP1 and 2 ready for increase in data vols from WP3 & WP4

# Project Strategy



from  
Seabed 2030 Project Plan

# Project Strategy funding



## The Nippon Foundation

- '...plan on funding Seabed 2030 for 10 years ' at an annual rate of \$1.8m
- Consider proposals June/July
- Approve funding on an annual basis: 1<sup>st</sup> Aug to 31<sup>st</sup> July

## Center Hosts

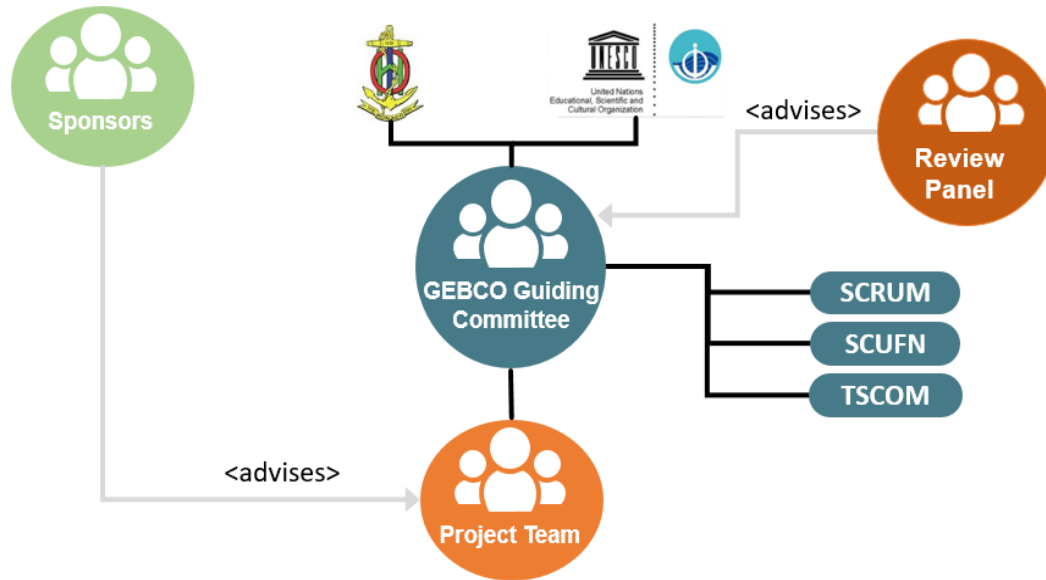
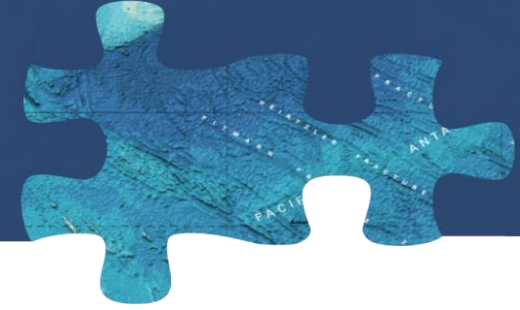
- Stockholm Uni
- UNH
- AWI
- NIWA
- Columbia University
- NOC

are providing significant support to Regional and Global Centers

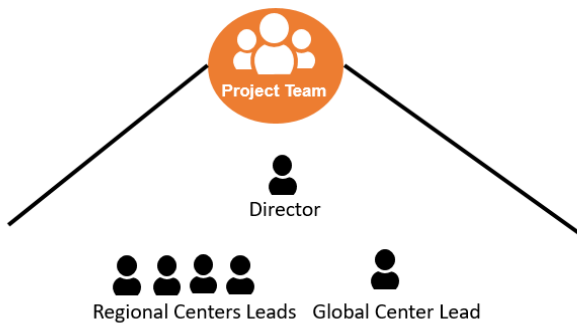
## Stockholm Uni, NOC & Robin Falconer

Are providing in kind/travel support to core Establishment Team :  
Martin Jakobsson, Robin Falconer & Graham Allen

# Project Governance



*Director + Center leads*



Year 1: Project Management

## GGC:

1. Endorses progress
2. Endorses direction
3. Reports to IHO and IOC

## Review Panel:

1. Provides independent view of progress & direction

## Sponsors:

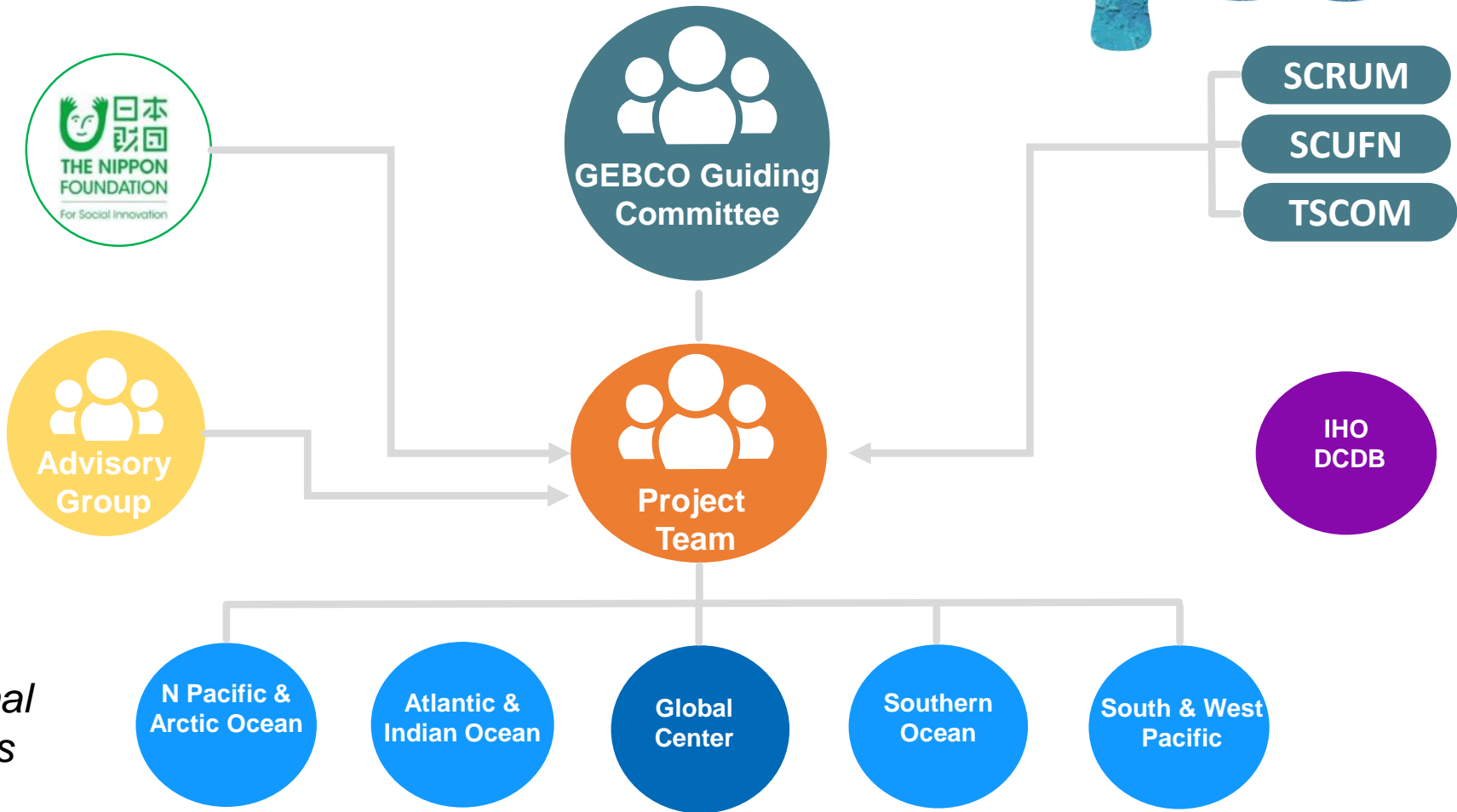
1. Advise Director on direction
2. 'Exec' view of progress

## Project Team

- 1 Reports to GGC on progress & direction



# Seabed 2030 Operations



# Year 1 Goals



## REGIONAL CENTERS

- **Sourcing regional data**
  - **Build** working relationships with all potential contributors
  - **Start** gathering bathymetric data
  - **Start** crowd sourcing to source data
  - By end of Year 1, all regional Editorial Boards **set up**.
- **First high-resolution map**
  - **Initiate** compilation of each regional map
- **Technical meeting**
  - RDACC staff to attend first technical meeting

## GLOBAL CENTER

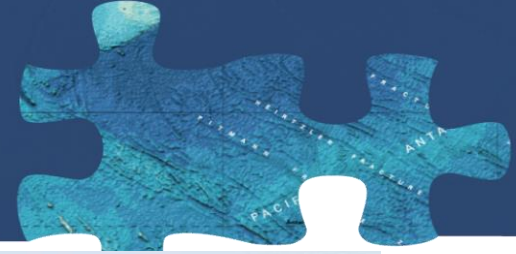
- **Establish data standards for regional map integration**
  - **Hold** first technical meeting of Seabed 2030 by end of Year 1
  - **Publish** data standards for data integration by end of Year 1
- **Prepare for production of the first updated world ocean map**, at the end of 2018
- **Design website and user interfaces.**
  - **Begin** development of data assembly tools

## PROJECT TEAM

- **Complete the Capacity Development Review**
- **Establish the Strategic Advisory Group**
  - First meeting **completed** by end of Year 1.
- **Establish a technology innovation working group**
  - **Complete** first meeting of working group by end of Year 1
  - Strategy for future work **completed** by end of Year 1
- **Progress towards a complete world ocean map**
  - **Confirm** the actual extent of current mapping coverage.
  - **Increase** data coverage to 17%

*Year 1 = 6 months of forming*

# Year 1 Achievements



## WP 5: MANAGEMENT

### *Forming the project team & centers*

- ✓ Set up of Centers
- ✓ Form the Project Team
- ✓ Induction of Project Director



Patrick Orr & Henry Gilliver  
Comms and PR

**Seabed 2030 Project Director:**  
  
Mr. Satinder Bindra

**Global Data Center:**  
National Oceanography Centre, UK  
**Center Head:**  
  
Dr. Helen Neil

**South and West Pacific Ocean Center:**  
New Zealand National Institute of Water and Atmospheric Research (NIWA)  
**Center Head:**  
  
Dr. Kevin Mackay

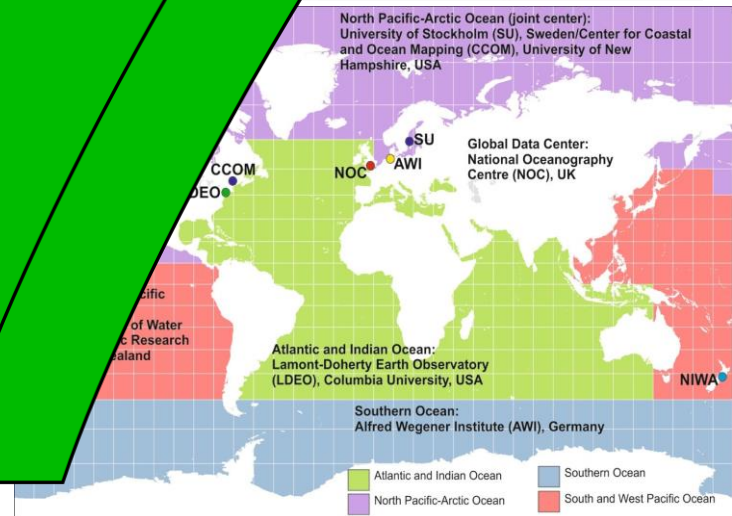
**Center Team:**  
NIWA:  
• Dr. Helen Neil  
• Dr. Kevin Mackay  
• Dr. Tilmann Steinmetz

**Atlantic and Indian Ocean Center:**  
Lamont-Doherty Earth Observatory, Columbia University, USA  
**Center Head:**  
  
Dr. Vicki E. Larson

**Center Team:**  
• Dr. ...  
• Dr. ...

**Southern Ocean Center:**  
Alfred Wegener Institute (AWI), Germany  
**Center Head:**  
  
Dr. Boris Dorschel

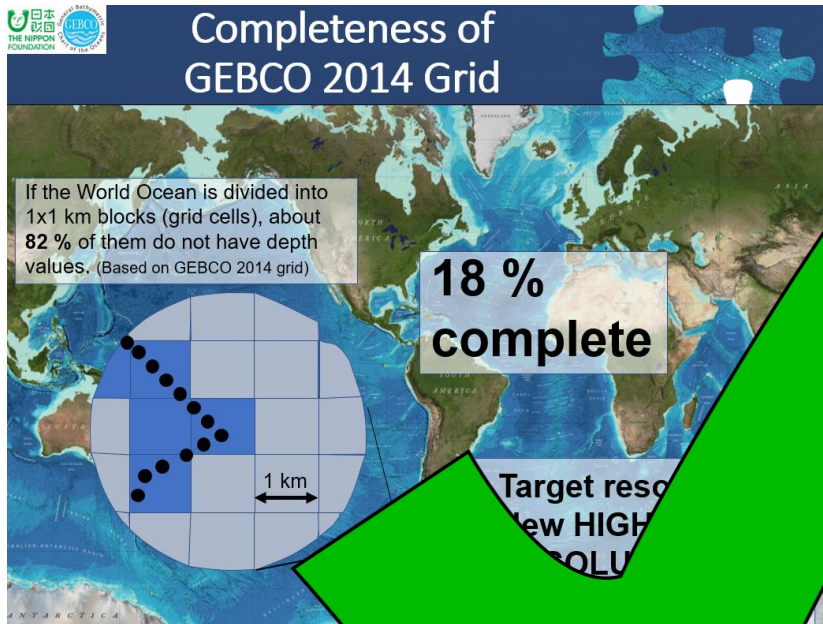
**Center Team:**  
• Dr. Jan Erik Arndt  
• Dr. Simon Dreutter  
• Ms Laura Hehemann



# Year 1 Achievements



**GOAL:** Confirm the actual extent of current mapping coverage

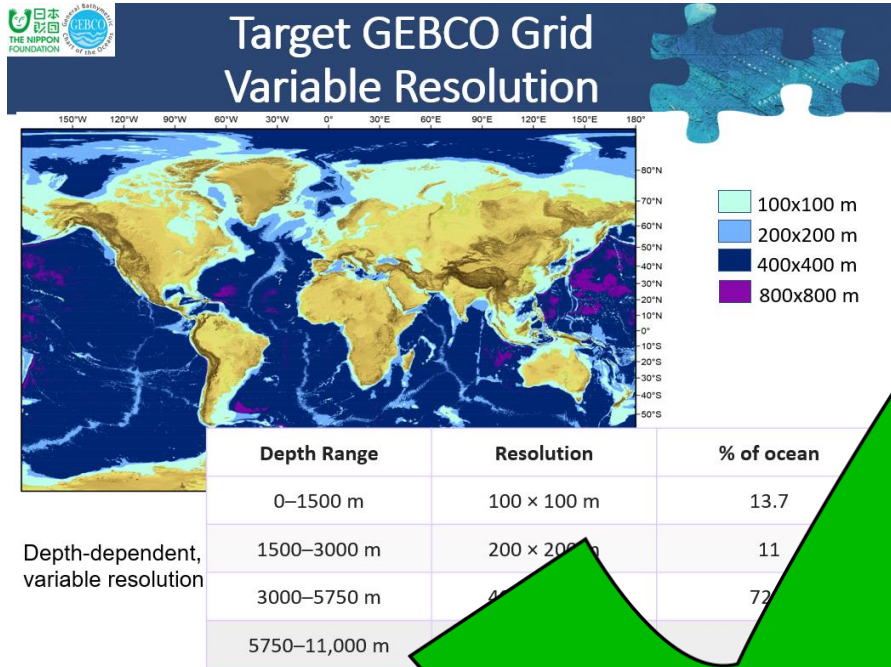


**WP 1: PUBLISHING THE GRID - DATA**

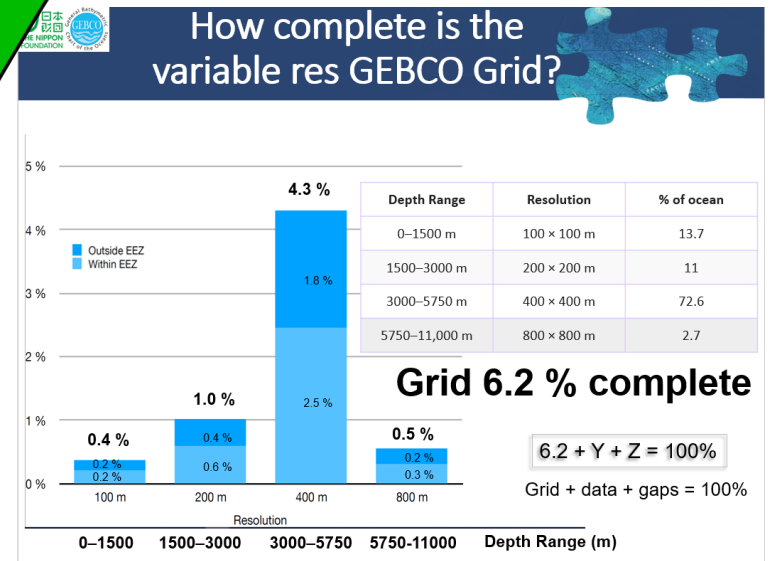
# Year 1 Achievements



## WP 2: TOOLS AND SYSTEMS DEVELOPMENT

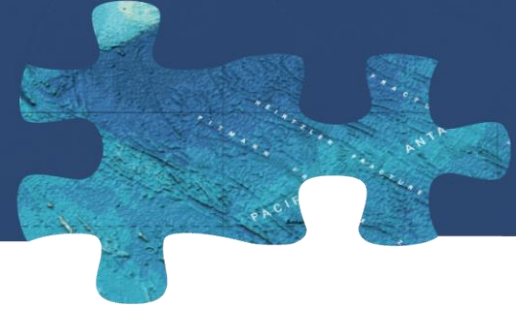


## PUBLISHING THE GRID - DATA

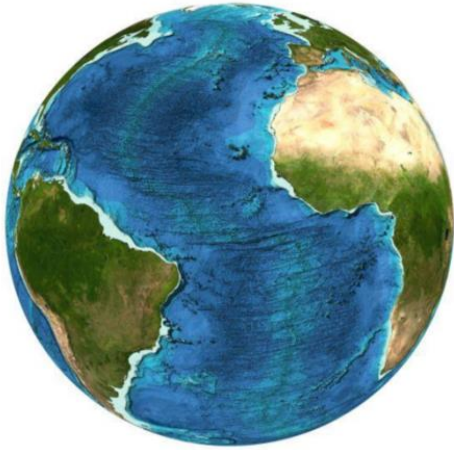


**GOAL:** First high-resolution  
Initiate compilation of each re

# Year 1 Achievements



## WP 1: PUBLISHING THE GRID - DATA



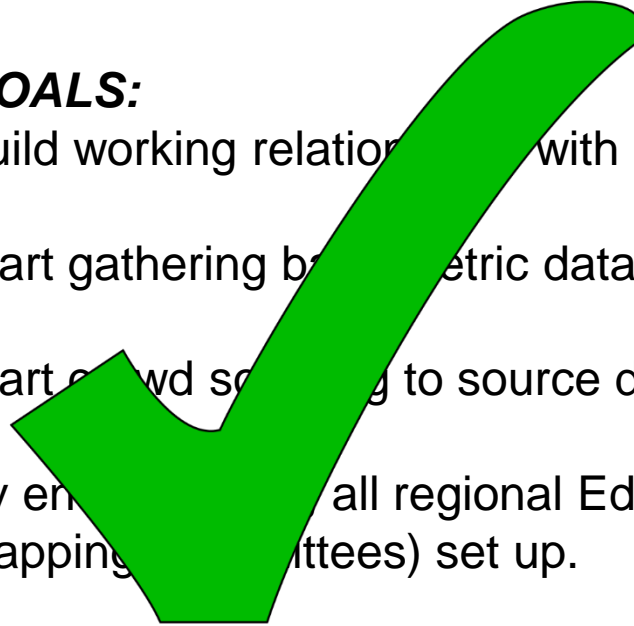
### **GOALS:**

Build working relationships with all potential contributors

Start gathering bathymetric data

Start crowd sourcing to source data

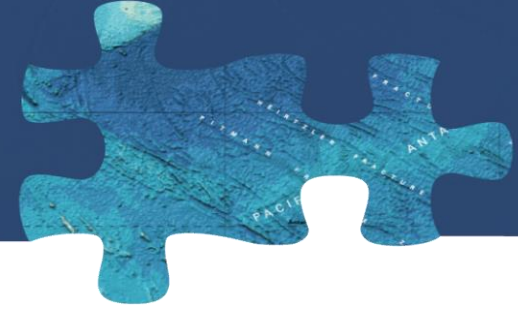
By end of year all regional Editorial Boards (Regional Mapping Committees) set up.



Regional Mapping Meetings held or planned:

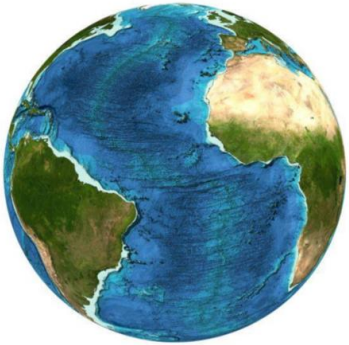
- Arctic, Antarctic & North Pacific Mapping Meeting 8<sup>th</sup> to 10<sup>th</sup> Oct 2018
- Atlantic & Indian Oceans Regional Mapping Meeting 30<sup>th</sup> Oct to 1<sup>st</sup> Nov 2018
- South & West Pacific Regional Mapping Meeting 11<sup>th</sup> to 13<sup>th</sup> Feb 2019

# Year 1 Achievements

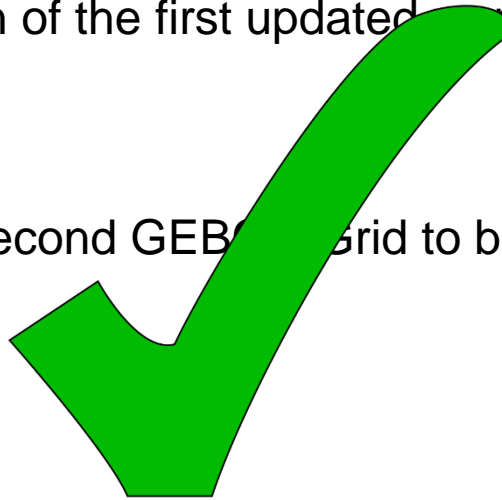


## WP 1: PUBLISHING THE GRID – DATA & WP 2: TOOLS AND SYSTEMS DEVELOPMENT

**GOAL:** Prepare for production of the first updated world ocean map, at the end of 2018



15 arc second GEBCO grid to be published by 31st December 2018



**GOAL:** Establish data standards for regional map integration

- Hold first technical meeting of Seabed 2030 by end of Year 1



1<sup>st</sup> Seabed 2030 Technical meeting held April 2018,  
hosted by ESRI



# Year 1 Achievements



## WP 2: TOOLS AND SYSTEMS DEVELOPMENT

**GOAL:** Design website and user interfaces.



[seabed2030.gebco.net/](http://seabed2030.gebco.net/)

Stage 1: Go Live October 2018

Global Centers who  
their areas and a  
Global Center that produces the global GEBCO  
grid.

[Read more](#)

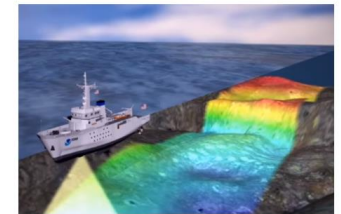
### Get involved



Find out how to get involved in the project and contribute to this international effort to map the global seafloor.

[Read more](#)

### News & media resources



Access our latest news items, videos, press releases and documents to find out more about GEBCO and Seabed 2030.

[Read more](#)



# Year 1 Achievements



## WP 1: PUBLISHING THE GRID - DATA

### GOALS:

Build working relationships with all potential contributors

Start gathering bathymetric data

Start crowd sourcing to source data



Mapping organization contribution data to Seabed 2030

**OCEAN INFINITY**  
Seabed Intelligence

**PERFORMANCE**  
OCEAN INFINITY DONATES  
120,000 SQUARE KILOMETERS OF  
DATA FOR MISSING MALAYSIAN  
AIRLINER TO GEBCO SEABED  
2030 PROJECT  
21/06/2018

Ocean Infinity donated 120,000 square kilometers of data from the search for missing Malaysian airliner to The Nippon Foundation-GEBCO Seabed 2030 Project.



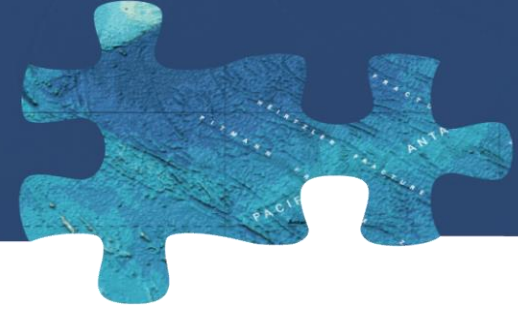
120,000 Km2



100,000 Km2

[https://seabed2030.gebco.net/resources\\_for\\_journalists/documents/ocean\\_infinity\\_press\\_release.pdf](https://seabed2030.gebco.net/resources_for_journalists/documents/ocean_infinity_press_release.pdf)

# Year 1 Achievements



## WP 5: MANAGEMENT

### GOALS:

- Establish the Strategic Advisory Group

### NOTE:

Work Package 5 details:

- Communication and outreach
- Human capacity development
- Operational management
- Strategic direction
- Funding raising



### Seabed 2030 Strategic Advisory Group



Dawn Wright  
Chief Scientist



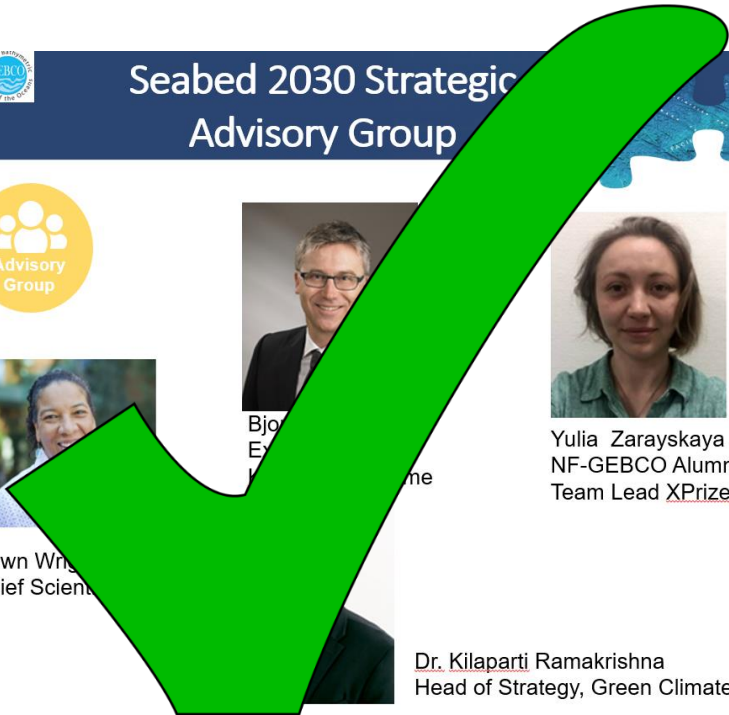
Bjorn Einarsson  
Executive Director



Yulia Zarayskaya  
NF-GEBCO Alumni  
Team Lead XPrize



Dr. Kilaparti Ramakrishna  
Head of Strategy, Green Climate Fund



# Year 1 Achievements



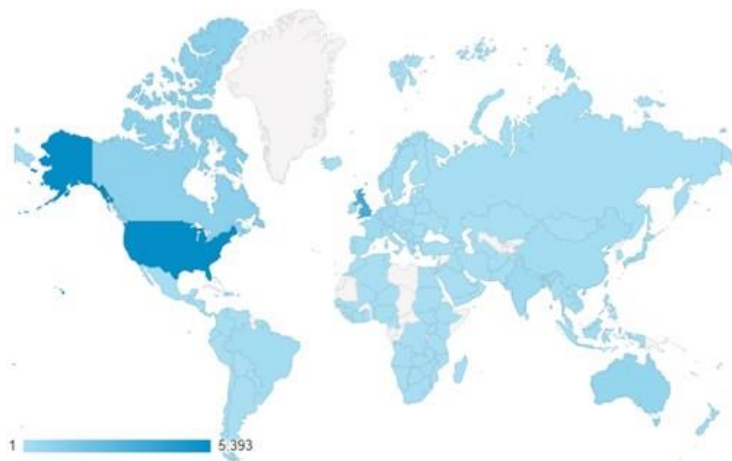
## WP 5: MANAGEMENT – no GOALS in Year 1 Plan

Work Package details:

- Communication and Outreach
- Significant global exposure in
  - Mainstream media
  - Mapping community
  - Academic community
  - Policy community

Work Package details

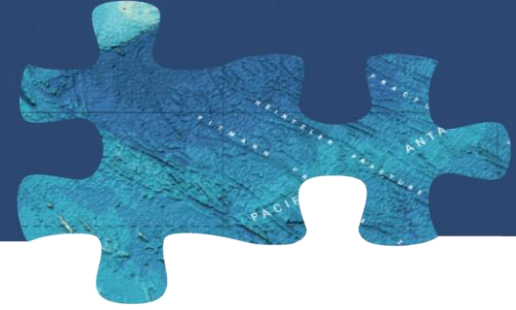
- operational management
- Year 1 Annual Report submitted
- Year 2 Work Plan submitted
- Year 2 funding secured



Seabed 2030 website access



# Year 1 Achievements (not)



## **WP 3: TECHNOLOGY INNOVATION**

**GOAL:** Establish a technology innovation working group

## **WP 4: MAP THE GAPS**

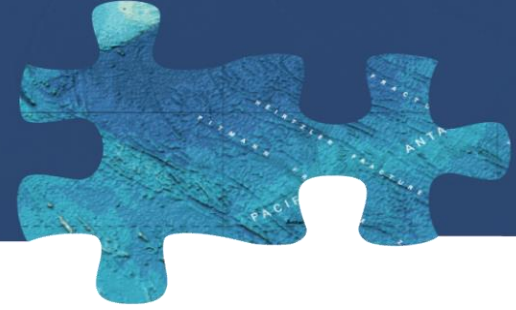
***No Year 1 GOAL***

## **WP 5: MANAGEMENT**

### **GOALS:**

- Complete the Capacity Development Review
- Establish the Strategic Advisory Group
  - First meeting completed by end of Year 1.

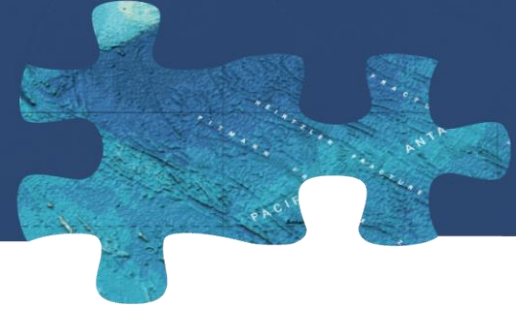
# Year 1 Work (unpublished)



Much work on other foundational aspects of Seabed 2030, not in year 1 work plan or communicated outside of Project Team, including:

- Visual identity/branding/marketing - logos
- Partnership agreements
- Legal entities
- .....

# 7 Lessons learnt

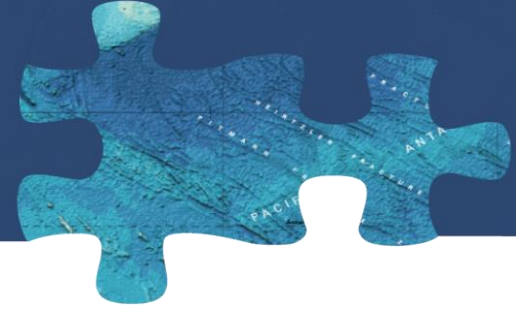


## Lessons learnt from Graham:

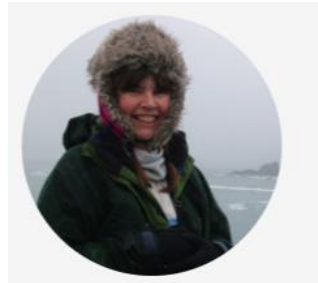
*Establishment team, step back from Year 1, re-introduced on Director resignation*

1. 6 month Year 1 = Project **initiation**
2. Very **ambitious** to initiate project + complete many tasks
3. **Paper work & timing** significant impact  
Contracts preparation → Delay in approval of Center Agreements → delay in recruiting center staff → underspend on staff
4. **Globally distributed/leveraged** project team work is challenging
5. Comms, networking, outreach effort is **immense**
6. **Unspecific** Year 1 Goals

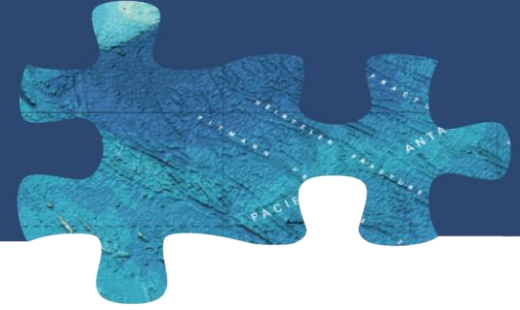
# 7 Lessons learnt



## 7. Center Leads – Awesome team; major momentum



# GGC Discuss



- GGC Discussion on Year 1 Annual Report
- Clarification from PROJECT TEAM

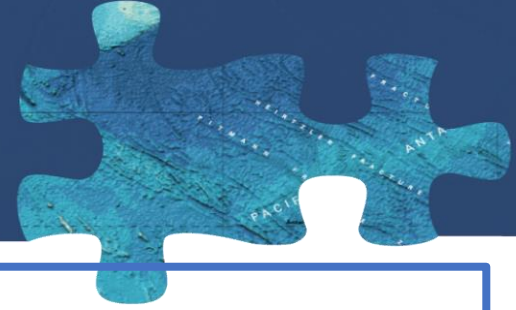
## DECISION OPTIONS:

- 1) Endorse the Year 1 Annual Report
- 2) Endorse with recommendations
- 3) Not endorse the Year 1 Annual Report
  - and request a resubmission

Discuss & ask questions.....



# GGC Decision



## **DECISION:**

➤ GGC decision to:

- 1) Endorse the Year 1 Annual Report?
- 2) Endorse with recommendations?
- 3) Not endorse the Year 1 Annual Report?
  - and request a resubmission

# Thank you

