

NLA International–Seabed 2030

Phase 3: Benefits Analysis Workstream

Document 1: Seabed 2030 Regional Segmentation Document

October 2022



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SECTION ONE: INTRODUCTION TO THE DOCUMENT

1.1 CONTEXT

The Nippon Foundation-GEBCO Seabed 2030 Project's vision to map the world's oceans by 2030 is insightful and ambitious setting a challenging timeline to address the 80% of the oceans that have yet to be charted to the required gridded resolution. The "Wind in the Sails" (WITS) proposal supports the Seabed 2030 Project by providing empirical evidence to enable the development of a prioritised, targeted survey strategy. The aim of this three-phase project is to unite the global hydrographic community and operators within the marine and maritime domains around an agreed global seabed mapping priority list, underpinned by a robust evidence base that articulates the true need and value of mapping the seabed in its entirety to a defined gridded depth variable resolution.

WITS phases are: (*Bold text current phase highlights the current phase of activity, Phase 3*)

- Phase 1: Rapid evidence review and fast action priority list.
- Phase 2: Detailed modeling, benefit extrapolation and prioritisation of need.
- **Phase 3: Benefits analysis and targeted community engagement to determine Prioritisation.**

1.2 'WIND IN THE SAILS' PHASE 3 TASK – PHASE 3: BENEFITS ANALYSIS AND TARGETED COMMUNITY ENGAGEMENT TO DETERMINE PRIORITISATION

WITS Phase 3 work builds on top of the phase 1 and 2 outputs and is also informed by the grounding evidence phase 1 community engagement survey findings. Phase 3 activities undertaken across FY 2022 address two key areas of focus:

- **Benefits analysis workstream**, producing a series of **Seabed 2030 parameters** for use in seabed mapping benefits analysis and to be available for use in future prioritisation decision-making, and **the articulation of Seabed 2030 seabed mapping programme benefits through the production of benefits documentation**, including Value Chain, Executive Fact Sheet, Value Proposition, and a set of Use Case Evidence, and,
- **Targeted community engagement**, to provide grounding evidence for prioritisation decisions, through:
 - **Seabed 2030 Management Engagement Ongoing:** *Fortnightly progress meetings, plus nominated peer to peer calls on for to inform / review documentation iterative development (to validate scope and focus as documents develop).*
 - **National body community engagement survey questionnaire:** *Global national bodies (Hydrographic Offices (HOs)) with responsibilities for hydrographic mapping/safety of respective national waters will be requested by letter to provide own views on the quantitative analysis and prioritisation of users from the WITS online survey. A survey and question set will be established for online responses by individual HOs / vested bodies and the results will be amalgamated with pre-existing "users" results to develop a combined and validated global prioritisation list.*
 - **Communications & Informed User Engagement:** *One article and one press release to be written during WITS Phase 3 Objectives 6 & 8 being completed, with NLAI attending and presenting at the Map the Gaps symposium on 27th October 2022.*

A further phase 3 workstream and area of focus, '**Seabed 2030 Prioritisation**', which is currently planned to be addressed in FY 2023, will develop the phase 2 proposed prioritisation approach into a documented

prioritisation methodology (Level 3 business process documentation produced), and, provide a tool review and design, with a prototyping of a tailored prioritisation tool workflow for Seabed 2030.

1.3 DOCUMENT PURPOSE & STRUCTURE

This document is the first of six document deliverable outputs from the Phase 3 benefits analysis workstream work, where:

- **Document 1: Seabed 2030 Regional Segmentation Document [Explainer document]**, (this document), is a guidance document, and informs Seabed 2030 towards adopting a 'Regional Segmentation' of the Global Oceans into Regional Areas of Interest for the purposes of benefits analysis and seabed mapping prioritisation.
- **Document 2: Seabed 2030 Value Chain [Explainer Document]**, *target submission at the end of November 2022*, is a guidance document, and describes a proposed value chain for Seabed 2030. The value chain informs benefit analysis / value analysis, and is also available to inform Seabed 2030 organisation operating model future evolution.
- **Document 3: Seabed 2030 Economic Impact Sectors Document**, *target submission at the end of November 2022*, is a guidance document, and describes a set of economic impact sectors for ongoing use in the Seabed 2030 benefit analysis and economic value assessment work.
- **Document 4: Document set of Use Cases [Up to 12 use cases]**, *target submission at the end of January 2023*, collates and documents a set of Seabed 2030 use cases. The use cases inform the Seabed 2030 benefits analysis model, evidence the evolving Seabed 2030 business case, and are available to support ongoing Seabed 2030 knowledge sharing activities and strategic communications.
- **Document 5: Seabed 2030 Executive Fact Sheet (Focus: Seabed 2030 seabed mapping)**, *target submission at the end of January 2023*, is a Seabed 2030 Executive Fact Sheet on the Seabed 2030 mapping programme.
- **Document 6: Seabed 2030 Seabed Mapping Programme Value Proposition Document**, *target submission at the end of January 2023*, is a Seabed 2030 Value Proposition Document for the Seabed 2030 mapping programme.

Document readership potentially include Seabed 2030 management, decision makers, and practitioners. The wider benefits analysis and prioritisation modeling are being developed with the same readership in mind (Seabed 2030 management, decision-makers, and practitioners), and additionally are being produced with researchers and future donors / funding bodies in mind.

Document 1 structure is as follows:

- Section 1: 'Introduction to the Document' – providing Seabed 2030, and WITS Phase 3 context and provides the purpose and layout of the report.
- Section 2: a summary of the approach adopted in developing the guidance to Seabed 2030 on seabed mapping benefits analysis regional segmentation.
- Section 3: identifies and reviews different community / entity of interest regional operational models that can be potentially used together with other informing geospatial reference data (as identified in section 4 below) to inform seabed mapping benefits analysis and prioritisation decision-making.
- Section 4: presents a target set of geospatial reference data to support the Seabed 2030 Regional segmentation for the primary purpose of seabed mapping benefits analysis.

- Section 5: 'Benefits Analysis Collation of Recommendations', providing a table of recommendations identified during the regional segmentation work for carry across into the WITS Phase 3 wider seabed mapping benefits analysis delivery, and for Seabed 2030 ongoing reference / use as applicable.
- Section 6: WITS phase 3 next steps.
- Annex 1: Glossary - Definition of Terms.
- Annex 2: References.

SECTION TWO: SEABED 2030 REGIONAL SEGMENTATION GUIDANCE – SUMMARY OF APPROACH

This section presents a summary of the approach adopted in developing the guidance to Seabed 2030 on seabed mapping benefits analysis regional segmentation.

2.1 SEABED 2030 REGIONAL SEGMENTATION GUIDANCE – SUMMARY OF APPROACH

The purpose of the Seabed 2030 regional segmentation activity is to consider how best to regionally segment the Global Oceans into Regional Areas of Interest for the purposes of benefits analysis and seabed mapping prioritisation.

By function, the regional segmentation of global oceans informs the framework and approach for both seabed mapping benefits analysis and seabed mapping prioritisation activities. It also informs how the study survey questionnaire to be executed during this WITS project phase will be positioned. Ideally regional segmentation will map across to wider seabed 2030 operations, to enable continuity / map over between benefits assessment, prioritisation, and future operational activities of Seabed 2030.

The activity is informed by the two Phase 2 Benefits Analysis Workstream Reports:

- Catalogue of Premium Models for Seabed Mapping Benefits Analysis [January 2022], and
- Proposed model for Seabed 2030 – Seabed Mapping Benefits Analysis and Prioritisation [April 2022]

With additional desk study and stakeholder engagement focusing on regional segmentation ‘feasibility’ and the identification and review of informing data (i.e., to identify and understand data that is either readily available or needs to be produced to support regional segmentation).

The activity was undertaken through the following logical steps, with a dedicated meeting with Seabed 2030 management to discuss regionalisation segmentation approach for potential adoption.

Step 1: [Desk study] Identify regional segmentation reference communities / entities models for consideration.

Step 2: [Desk study and targeted stakeholder engagement] Capture informing details on each community / entity regional segmentation model.

Step 3: [Desk study] Document community / entity regional segmentation model details - please refer to section 3 below.

Step 4: [Desk study] Review to understand feasibility to which regional boundary data can be readily collated in common GIS format (for use in Seabed 2030 future-proposed prioritisation tool) and document findings, with any associated recommendations - please refer to section 3 below.

Step 5: [Stakeholder engagement] Meet with Seabed 2030 management to discuss the project regional segmentation findings and recommendations, with the objective to reach a consensus approach to regionalisation segmentation for adoption initially for the current WITS work and for potential future use for seabed mapping benefits analysis and prioritisation.

Step 6: [Desk study & Stakeholder engagement] Produce a draft version deliverable, Seabed 2030 Regional Segmentation Document [This document], and issue draft version for Seabed 2030 management review.

Step 7: [Desk study & Stakeholder engagement] Update the draft document to take account of Seabed 2030 management comments, finalise and make available for benefits analysis workstream use.

SECTION THREE: COMMUNITIES / ENTITIES OF INTEREST REGIONAL SEGMENTATION OPERATING MODELS REVIEW

This section identifies and reviews different community / entity of interest regional operational models that can be potentially used together with other informing geospatial reference data (as identified in section 4) to inform seabed mapping benefits analysis and prioritisation decision-making.

The following community / entities regional operating models were identified for consideration at this time:

- The International Union for Conservation of Nature (IUCN; officially International Union for Conservation of Nature and Natural Resources)
- World Bank Group (WBG)
- Intergovernmental Oceanographic Commission of UNESCO
- (IOC-UNESCO) United Nations Environment Programme (UNEP)
- The United Nations Framework Convention on Climate Change (UNFCCC), including UN Climate Change Conferences (aka COP26/COP27, etc.)
- United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP)
- United Nations Committee of Experts on Global Geospatial Information Management (UNGIM - Statistics Division, – *our interest being 'maritime' aspects of UNGIM work*)
- The Organisation for Economic Co-operation and Development (OECD)
- International Cable Protection Committee (ICPC)
- Nippon Foundation

The following review details are presented by common table format for each community / entity by dedicated sub-section below.

- Community / Entity Name
- Website URL
- Headquarters (Address)
- Overview
- Mission
- Regional Operating Models
- Regional Map / Graphic, *where readily available*.
- Seabed 2030 context

3.1 REGIONAL SEGMENTATION ENTITY REVIEW - The International Union for Conservation of Nature (IUCN; officially International Union for Conservation of Nature and Natural Resources)

Community Entity Name: The International Union for Conservation of Nature (IUCN; officially International Union for Conservation of Nature and Natural Resources)	
Website URL	https://www.iucn.org/
Headquarters (Address)	IUCN Headquarters, Rue Mauverney, 1196 Gland, Switzerland Telephone +41 22 9990000
Overview: The International Union for Conservation of Nature (IUCN; officially International Union for Conservation of Nature and Natural Resources) is an international organization working in the field of nature conservation and sustainable use of natural resources. It is involved in data gathering and analysis, research, field projects, advocacy, and education.	

Mission: IUCN's mission is to "influence, encourage and assist societies throughout the world to conserve nature and to ensure that any use of natural resources is equitable and ecologically sustainable".

Regional Operating Model: IUCN has 11 operational regions that coordinate their work in more than 160 countries.

Regions include: (1) Asia, (2) Eastern and Southern Africa, (3) Eastern Europe and Central Asia (4) Europe (5) Mediterranean (6) Mexico, Central America, and the Caribbean (7) North America (8) Oceania (9) South America (10) West and Central Africa and (11) West Asia.

The IUCN operational regions implement IUCN's Programme in their respective territories. Each operational region is led by a director who reports to the Director General via the Deputy Director General - Regional and Outposted Offices. IUCN has offices in more than 50 countries and runs projects all around the world. IUCN have Member organisations and State Members in more than 160 countries and a network of over 15,000 voluntary scientists and experts spanning the globe. IUCN's operational regions coordinate projects in States as listed on website here: <https://www.iucn.org/regions>

IUCN coordinates their work by region and theme. Themes include: (1) Biodiversity (2) Business, finance, and economics (3) Climate change (4) Freshwater and water security (5) Governance - law and rights (6) Nature-based Solutions (7) Ocean and coasts and (8) Protected areas and land use.

IUCN has a Nature 2030 programme towards Oceans, see here: <https://www.iucn.org/nature-2030/ocean> Where IUCN reports, "Ocean warming, ocean acidification, ocean deoxygenation, overfishing and pollution are causing long-term harm to marine life, and the people who depend upon it. Poorly regulated sea-bed mining could further damage marine ecosystems. Without reform, the situation is set to worsen with profound impacts for humanity, life in the oceans and global weather systems.

By 2030, a healthy ocean supports nature and people, governed by strengthened national and international legal frameworks and sustainable investments that retain and restore ocean and coastal biodiversity and associated services for future generations. Impact targets include:

- 1: The loss of marine species and decline of marine ecosystem integrity is halted, and restoration initiated.
- 2: Uses of marine natural resources generate overall positive biodiversity outcomes and sustain livelihood benefits for coastal communities.
- 3: Ocean and coastal processes are maintained as a key foundation for planetary stability."

Regional Map / Graphic (where readily available):

Regions include: (1) Asia, (2) Eastern and Southern Africa, (3) Eastern Europe and Central Asia (4) Europe (5) Mediterranean (6) Mexico, Central America and the Caribbean (7) North America (8) Oceania (9) South America (10) West and Central Africa and (11) West Asia.



Seabed 2030 Context:

The International Union for Conservation of Nature and Natural Resources (IUCN) review findings / recommendations on the regionalisation topic, include:

- Regional focal / contact points are potentially available to support Seabed 2030 ongoing engagement (IUCN Operational Regional Directors are proposed entry POCs).
- It will be potentially helpful to make reference to IUCN Ocean and coasts in the WITS Seabed 2030 benefits analysis workstream work [use case].

3.2 REGIONAL SEGMENTATION ENTITY REVIEW - World Bank Group (WBG)

Community Entity Name: World Bank Group (WBG)	
Website URL	https://www.worldbank.org/en/home and https://www.worldbank.org/en/programs/problue
Headquarters (Address)	1818 H Street, NW Washington, DC 20433 USA (202) 473-1000
<p>Overview: The World Bank Group (WBG) works in every major area of development. WBG provide a wide array of financial products and technical assistance, and help countries share and apply innovative knowledge and solutions to the challenges they face.</p>	
<p>Mission: The World Bank Group is a unique global partnership: WBG has 189 member countries, staff from more than 170 countries, and offices in over 130 locations. Five institutions working for sustainable solutions that reduce poverty and build shared prosperity in developing countries.</p> <p>The five WBG institutions include:</p> <ul style="list-style-type: none"> (i) International Bank for Reconstruction and Development (IBRD) - The International Bank for Reconstruction and Development (IBRD) lends to governments of middle-income and creditworthy low-income countries. (ii) International Development Association (IDA) - The International Development Association (IDA) provides interest-free loans — called credits — and grants to governments of the poorest countries. <i>Together, IBRD and IDA make up the World Bank.</i> (iii) International Finance Corporation (IFC) - The International Finance Corporation (IFC) is the largest global development institution focused exclusively on the private sector. We help developing countries achieve sustainable growth by financing investment, mobilizing capital in international financial markets, and providing advisory services to businesses and governments. (iv) Multilateral Investment Guarantee Agency (MIGA) - The Multilateral Investment Guarantee Agency (MIGA) was created in 1988 to promote foreign direct investment into developing countries to support economic growth, reduce poverty, and improve people's lives. MIGA fulfills this mandate by offering political risk insurance (guarantees) to investors and lenders. And, (v) International Centre for Settlement of Investment Disputes (ICSID) - The International Centre for Settlement of Investment Disputes (ICSID) provides international facilities for conciliation and arbitration of investment disputes. <p>Three priorities guide WBG work with countries to end poverty and boost prosperity for the poorest people. (i) Helping create sustainable economic growth, (ii) investing in people and (iii) building resilience to shocks and threats that can roll back decades of progress.</p> <p>Since 1947, the World Bank has funded over 12,000 development projects, via traditional loans, interest-free credits, and grants.</p>	
<p>Regional Operating Model:</p> <p>The World Bank operates day-to-day under the leadership and direction of the president, management and senior staff, and the vice presidents in charge of Global Practices, Cross-Cutting Solutions Areas, regions, and functions.</p> <p>The World Bank has six 'Regional Units':</p> <ol style="list-style-type: none"> 1. Africa 2. East Asia & Pacific 3. Europe & Central Asia 4. Latin America & the Caribbean 	

5. Middle East & North Africa
6. South Asia

And assigns countries in the following 'Country Groups':

- European Union
- Middle Income Countries
- Organization of Eastern Caribbean States
- Pacific Islands
- Small States
- Gulf Cooperation Council
- Western Europe

WBG operates eighteen 'Global Practices':

1. Agriculture
2. Education
3. Energy
4. Environment & Natural Resources
5. Extractive Industries
6. Finance, Competitiveness & Innovation
7. Governance
8. Health, Nutrition & Population
9. Human Development
10. Jobs and Development
11. Macroeconomics, Trade & Investment
12. Poverty
13. Social Protection
14. Social Sustainability and Inclusion
15. Urban, Disaster Risk, Resilience, and Land
16. Transport
17. Digital Development
18. Water

Of key potential interest to Seabed 2030, Blue Economy is a focus area of / within the World Bank Environment & Natural Resources Global Practice. The World Bank has a program dedicated to helping client countries transition to a blue economy approach, called 'PROBLUE', see here:

<https://www.worldbank.org/en/programs/problue>

PROBLUE is an umbrella multi-donor trust fund, administered by the World Bank, that supports the sustainable and integrated development of marine and coastal resources in healthy oceans. Administered by the World Bank Environment, Natural Resources, and Blue Economy Global Practice, PROBLUE aims to achieve integrated, sustainable economic development for marine communities and to protect the world's oceans. In fiscal year (FY) 2022, PROBLUE grew through increased commitments and activity proposals, establishing milestones and standards for the blue economy approach. In FY22, this work centered on three main focus areas: links between ocean development and climate action, the blue economy as a driver of global recovery and growth, and full inclusion of client countries including vulnerable communities, including indigenous populations, while preventing further nature loss along coasts and in oceans.

Highlight PROBLUE projects are detailed in the PROBLUE annual report, see here:

<https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099446210212213910/idu060636a660193c04f2508ed80ade2d52f46dd>

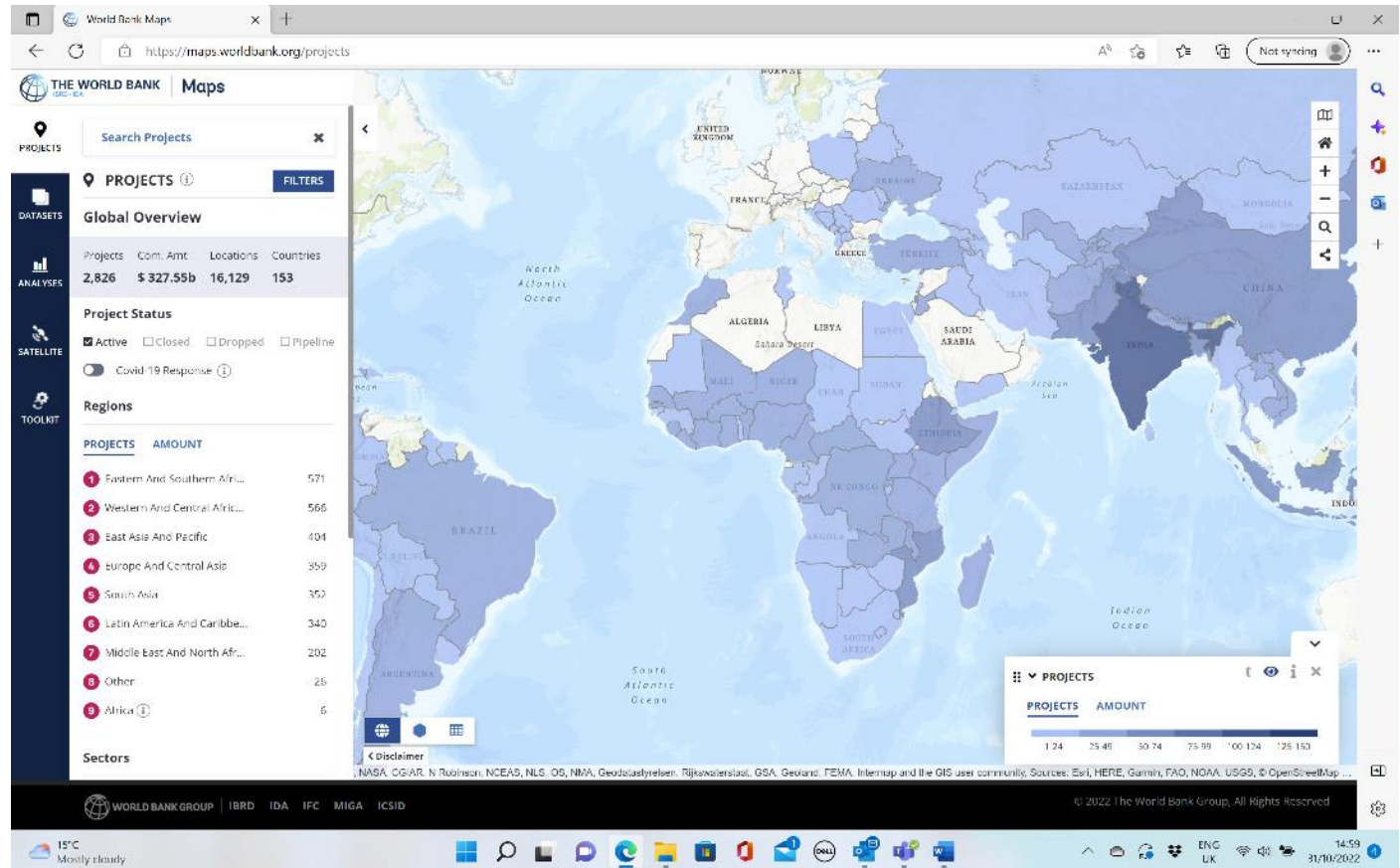
Regional Map / Graphic (where readily available):

Regional activities (and countries by region) can be accessed here by region:

- Region Africa: <https://www.worldbank.org/en/region/afr>

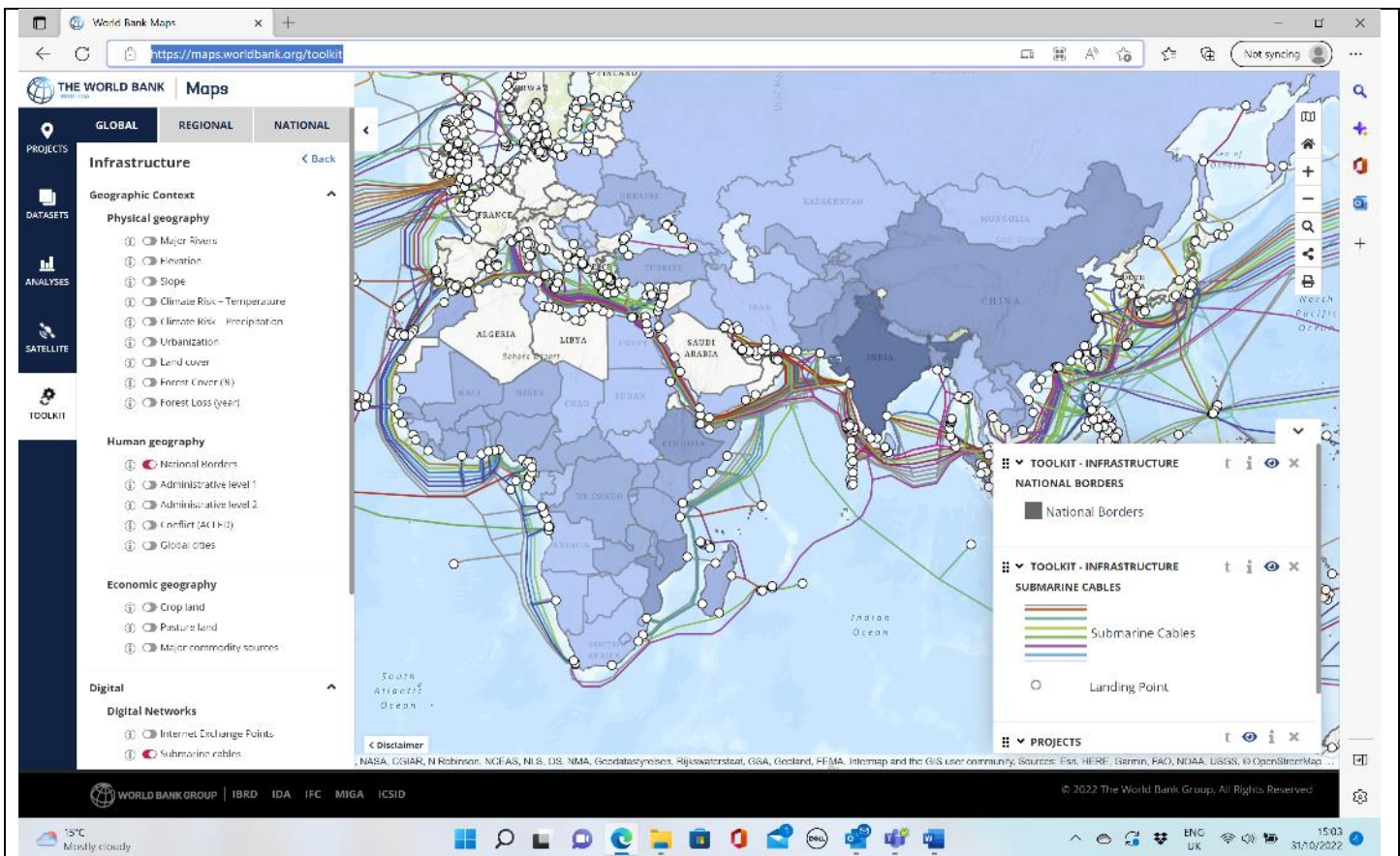
- Region East Asia and Pacific: <https://www.worldbank.org/en/region/eap>
- Region Europe and Central Asia: <https://www.worldbank.org/en/region/eca>
- Region Latin America and Caribbean: <https://www.worldbank.org/en/region/lac>
- Region Middle East and North Africa: <https://www.worldbank.org/en/region/mena>
- Region South Asia: <https://www.worldbank.org/en/region/sar>

A Map of WBG Projects can be accessed here: <https://maps.worldbank.org/>

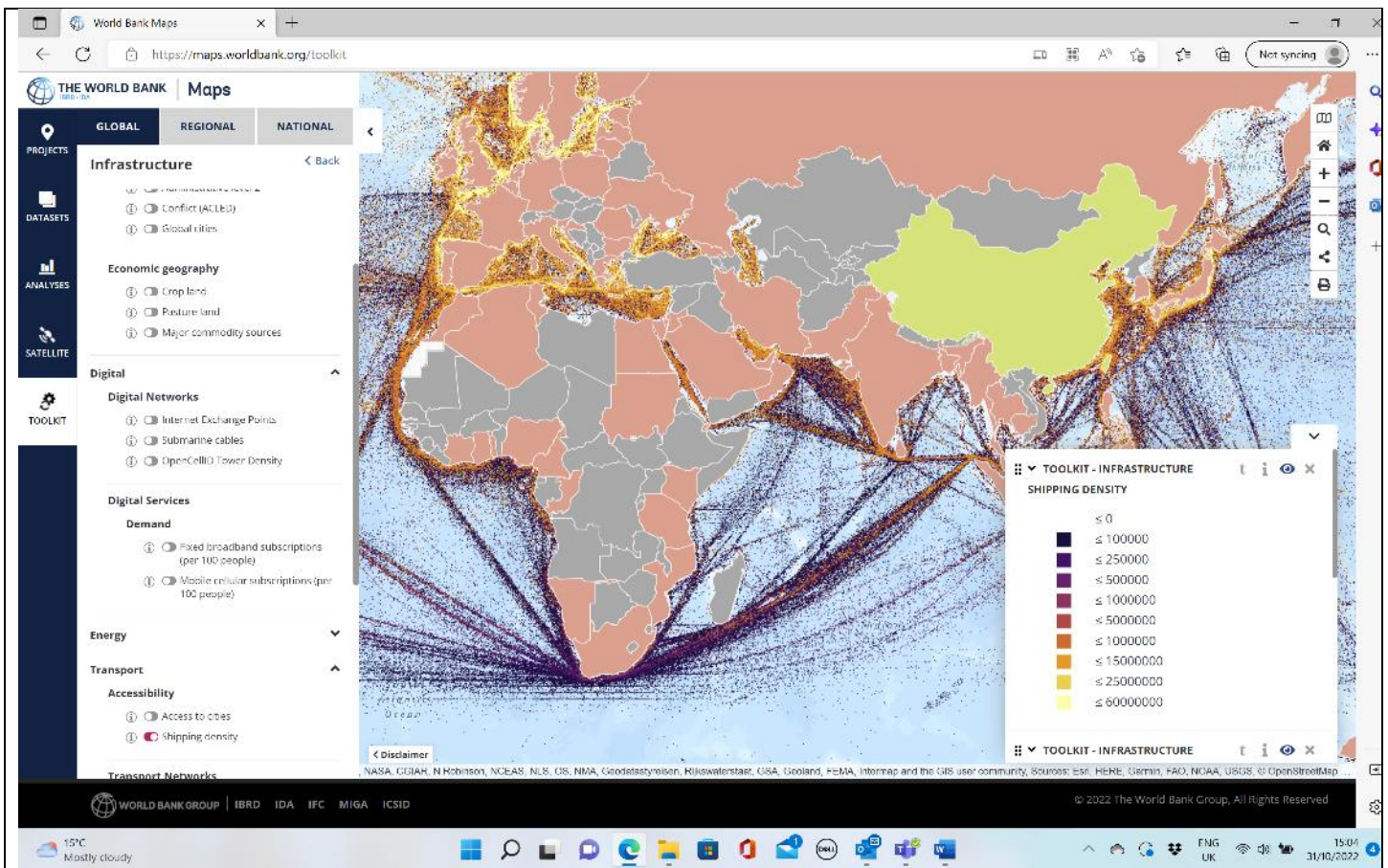


And geographic reference data can be displayed here:

<https://maps.worldbank.org/toolkit>



With useful reference data available for use, e.g., submarine cables (above) and shipping density (below).



Seabed 2030 Context:

The World Bank Group (WBG) review findings / recommendations on the regionalisation topic, include:

- There may be potential opportunity for the provision of seabed mapping data for use in various WBG toolkit(s).
- WBG provides a potential point of access to thematic geospatial data (globally collated data), e.g., WBG collate global vessel traffic data.
- Ongoing engagement with WBG regional projects is proposed considered by Seabed 2030 for these programmes to potentially benefit from access to seabed mapping data and/or further build demand for seabed mapping data.
- It may be potentially helpful to make reference to World Bank Environment & Natural Resources Global Practice in the WITS Seabed 2030 benefits analysis workstream work [use case and value proposition grounding evidence].
- A proposed access point for Seabed 2030 is via the World Bank Environment & Natural Resources Global Practice.

3.3 REGIONAL SEGMENTATION ENTITY REVIEW - Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO)

Community Entity Name: Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO)	
Website URL	https://ioc.unesco.org/
Headquarters (Address)	The IOC Secretariat is located in Paris, France. Address: Intergovernmental Oceanographic Commission of UNESCO, 7 Place de Fontenoy, 75352 Paris Cedex 07 SP. France Telephone: +33 1 45 68 39 84 Executive Secretary: Dr. Vladimir Ryabinin
<p>Overview: The Intergovernmental Oceanographic Commission of UNESCO (IOC) is the United Nations body responsible for supporting global ocean science and services. The IOC enables its 150 Member States to work together to protect the health of our shared ocean by coordinating programmes in areas such as ocean observations, tsunami warnings and marine spatial planning. Since it was established in 1960, the IOC has provided a focus for all other United Nations bodies that are working to understand and improve the management of our oceans, coasts, and marine ecosystems. Today, the IOC is supporting all its Member States to build their scientific and institutional capacity in order to achieve the global goals including the UN Agenda 2030 and its Sustainable Development Goals, the Paris Agreement on Climate Change, and the Sendai Framework on Disaster Risk Reduction.</p> <p>The IOC enables its 150 Member States to coordinate marine scientific research programmes, ocean services and related activities such as capacity development. At the national level, the IOC works with the relevant marine, ocean, and coastal management agencies to ensure that policymakers have access to the best possible ocean science and services.</p>	
<p>Mission: The purpose of the Commission is to promote international cooperation and to coordinate programmes in research, services and capacity-building, in order to learn more about the nature and resources of the ocean and coastal areas and to apply that knowledge for the improvement of management, sustainable development, the protection of the marine environment, and the decision-making processes of its Member States. (IOC Statutes, Article 2.1).</p> <p>The IOC is working to achieve its Vision through the following High-Level Objectives:</p> <ul style="list-style-type: none"> • Healthy ocean and sustained ocean ecosystem services. • Effective warning systems and preparedness for tsunamis and other ocean-related hazards. • Resilience to climate change and contribution to its mitigation. • Scientifically founded services for the sustainable ocean economy. • Foresight on emerging ocean science issues. 	
<p>Regional Operating Model: IOC works behind the scenes to enable its Member States to work together to strengthen our scientific understanding of the ocean for the benefit of humanity.</p> <p>The IOC Assembly meets once per biennium, while an Executive Council meets every year. The purpose of the Assembly is to review the work of the Commission, including the work of the Member States and the Secretariat, and formulate a common work plan for the coming two years. The Executive Council reviews issues and items from on-going work plans, and makes preparations for the Assemblies.</p> <p>IOC works and has interests in a wide range of oceanographic topic areas, including: Acidification (Ocean), Biodiversity, Blue Carbon, Blue Economy, Capacity Development, Climate, Data and Information (Ocean), Deep Sea, Deoxygenation (Ocean), Early Career Professionals (Ocean science), Early Warning, Eutrophication / Nutrients, Gender, Harmful Algal Blooms, Integrated Coastal Area Management (ICAM), Large Marine Ecosystems, Law of the Sea, Marine Pollution, Marine Spatial Planning, Observations</p>	

(Ocean), Ocean Decade, Ocean Literacy, Plastics (Marine), Science (Ocean), Science Policy, Seabed Mapping, Sustainable Development Goals (SDG), Time Series, Modelling, and Predictions, Tsunami and Ocean Hazards, World Oceans Day, World Tsunami Awareness Day, and Youth

For Seabed 2030 key interest IOC is promoting seabed mapping – see here:

<https://ioc.unesco.org/topics/seabed-mapping>, and

Ocean Decade – see here: <https://ioc.unesco.org/topics/ocean-decade>

Potentially useful POCs for Seabed 2030, include the members of the Ocean Decade advisory board, see here: <https://www.oceandecade.org/decade-advisory-board/>. The Decade Advisory Board is an advisory body to UNESCO's Intergovernmental Oceanographic Commission (IOC), the UN body tasked with coordinating the Ocean Decade, that will provide strategic advice on Decade implementation. Members are selected for a period of two years and serve in their individual capacities. See here:

<https://www.oceandecade.org/regional-ocean-decade-ecosystem/>

In order to respond to regional needs, the IOC operates via the following Offices:

- IOC Sub-Commission for the Western Pacific (WESTPAC), see here: TBD
- IOC Sub-Commission for Africa and Adjacent Island States (IOCAFRICA), see here: <https://www.ioc-africa.org/>
- IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE), see here: <https://iocaribe.ioc-unesco.org/en>
- International Oceanographic Data and Information Exchange (IODE) Project Office, see here: <https://www.iode.org/>
- IOC Science and Communication Centre on Harmful Algae / Harmful Algal Bloom (HAB) Project Office, see here: <https://hab.ioc-unesco.org/>
- Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS), see here: http://www.ioc-tsunami.org/index.php?option=com_content&view=article&id=8&Itemid=13&lang=en
- Indian Ocean Tsunami Information Centre (IOTIC), see here: <https://iotic.ioc-unesco.org/>
- Caribbean Tsunami Information Center (CTIC), see here: <https://www.ctic.ioc-unesco.org/>
- IOC/WMO Joint Centre for Oceanographic and Marine Meteorological Observing Programme Support (JCOMMOPS), see here: TBD
- Perth Programme Office, see here: TBD

Further IOC POCs include, see here: <https://ioc.unesco.org/about/our-structure/ioc-officers>

- Chair: Mr. Ariel Hernán Troisi
- Vice Chair Group I Ms. Marie-Alexandrine Sicre, France
- Vice Chair Group II: Mr. Alexander Frolov, Russia
- Vice Chair Group III: Mr. Frederico Antonio Saraiva Nogueira, Brazil
- Vice Chair Group IV: Mr. Srinivasa Kumar Tummala, India
- Vice Chair Group V: Mr. Karim Hilmi, Morocco

Regional Map / Graphic (where readily available):

Not Applicable

Seabed 2030 Context:

The Intergovernmental Oceanographic Commission of UNESCO (IOC) review findings / recommendations on the regionalisation topic, include:

- IOC endorses and promotes Seabed 2030
- IOC potentially provide an opportunity for Seabed 2030 to coordinate regional engagement on oceanographic community e.g., via Vice Chairs and towards the various regional programmes of the IOC.
- IOC may potentially provide useful Seabed 2030 benefit analysis use case POCs (e.g., selected across subset of the various IOC regional programmes).

3.4 REGIONAL SEGMENTATION ENTITY REVIEW – United Nations Environment Programme (UNEP)

Community Entity Name: United Nations Environment Programme (UNEP)	
Website URL	https://www.unep.org/ and https://www.unep.org/explore-topics/oceans-seas
Headquarters (Address)	UN Environment Programme United Nations Avenue, Gigiri Nairobi, Kenya P.O. Box 30552, 00100 Nairobi, Kenya Tel: +254 (0)20 762 1234
<p>Overview: Since its inception in 1972, the United Nations Environment Programme (UNEP) has been the global authority that sets the environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the UN system and serves as an authoritative advocate for the global environment.</p> <p>Mission: UNEP's mission is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations.</p> <p>UNEP works on delivering transformational change for people and nature by drilling down on the root causes of the three planetary crises of climate change, nature and biodiversity loss, and pollution and waste. UNEP employs seven interlinked subprogrammes for action: Climate Action, Chemicals and Pollutions Action, Nature Action, Science Policy, Environmental Governance, Finance and Economic Transformations and Digital Transformations.</p> <p>Through its campaigns, particularly World Environment Day, UNEP raises awareness and advocates for effective environmental action.</p> <p>UNEP operates a World Environment Situation Room hosting and presenting Data, Information and Knowledge on the Environment, see here: https://wesi.unep.org/, including data, information and knowledge on ocean, seas and coasts, see here: https://wesi.unep.org/article/ocean-seas-and-coasts</p> <p>UNEP addresses global considerations relevant to informing Seabed 2030 Regionalisation benefits analysis matters, including:</p> <ul style="list-style-type: none"> • Marine Protected Areas (MPAs), and is developing a MPA toolbox and learning platform, see here: https://www.unep.org/explore-topics/oceans-seas/what-we-do/promoting-effective-marine-protected-areas, and contact Ole Vestergaard, Ecosystems Division, Marine and Coastal Ecosystems Branch, UN Environment Programme, United Nations Avenue, Gigiri, P. O. Box 30552, 00100, Nairobi, Kenya. Email: ole.vestergaard@un.org • Global Environment Monitoring System for the Ocean and Coasts (GEMS Ocean) Programme, see here: https://www.unep.org/explore-topics/oceans-seas/what-we-do/ocean-and-coastal-observations. Including reference to the following resolutions, along with GEMS Ocean's role in the foundational science-policy subprogramme of UNEP's Medium-Term Strategy 2022-2025, provide the framework and mandate for the GEMS Ocean Programme. <ul style="list-style-type: none"> ○ UNEP/EA.2/Res.10: Oceans and seas ○ UNEP/EA.4/Res.6: Marine plastic litter and microplastics ○ UNEP/EA.4/Res.11: Protection of the marine environment from land-based activities ○ UNEP/EA.4/Res.12: Sustainable management for global health of mangroves ○ UNEP/EA.4/Res.13: Sustainable coral reefs management ○ UNEP/EA.4/Res.21: Implementation plan "Towards a pollution-free planet" ○ UNEP/EA.4/Res.23: Keeping the world environment under review ○ UNEP/EA.5/Res.2: Sustainable Nitrogen Management ○ UNEP/EA.5/Res.5: Nature-based Solutions for Sustainable Development ○ UNEP/EA.5/Res.14: End plastic pollution: towards an international legally binding instrument ○ UNEP's Marine and Coastal Strategy 	

- Global status of coral reefs. See here: <https://www.unep.org/explore-topics/oceans-seas/what-we-do/protecting-coral-reefs/why-protecting-coral-reefs-matters>, and 'Status of the world's coral reefs', see here: <https://www.unep.org/interactives/status-world-coral-reefs/>

Regional Operating Model: Headquartered in Nairobi, Kenya, UNEP works through its divisions as well as regional, liaison and out-posted offices and a growing network of collaborating centres of excellence.

UNEP works closely with its 193 Member States and representatives from civil society, businesses, and other major groups and stakeholders to address environmental challenges through the UN Environment Assembly, the world's highest-level decision-making body on the environment.

The organization hosts the secretariats of many critical multilateral environmental agreements and research bodies.

The Executive Director and Senior Management Team lead the implementation of UNEP's Medium-Term Strategy (MTS). The four-year MTS articulates UNEP's role in delivering the promises of the 2030 Agenda for Sustainable Development and the UN Conference on Sustainable Development (Rio+20) as well as its outcome document, "The Future We Want."

UNEP supports Member States to ensure that environmental sustainability is reflected in development and investment planning and provides countries with the necessary tools and technologies to protect and restore the environment.

To deliver on its programme, UNEP relies on voluntary financial contributions to the programme budget. Ninety-five per cent of this funding is provided voluntarily by funding partners.

UNEP Regional presence is aligned with six regions:

1. Africa
2. Asia and the Pacific
3. Europe
4. Latin America and the Caribbean
5. North America
6. West Asia

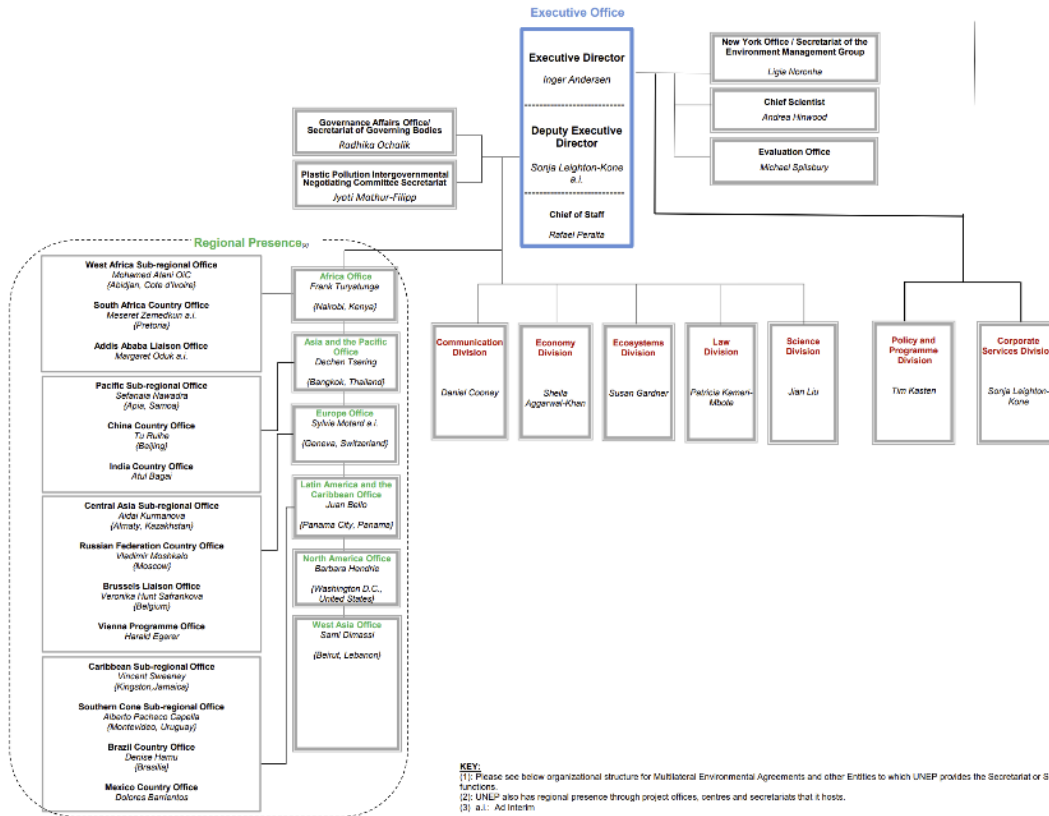
With sub-regional offices, country offices as presented in the graphic further below, (and addressed through fourteen key office locations).

UNEP also has regional presence through further project offices, centres, and secretariats that it hosts.

Regional Map / Graphic (where readily available):

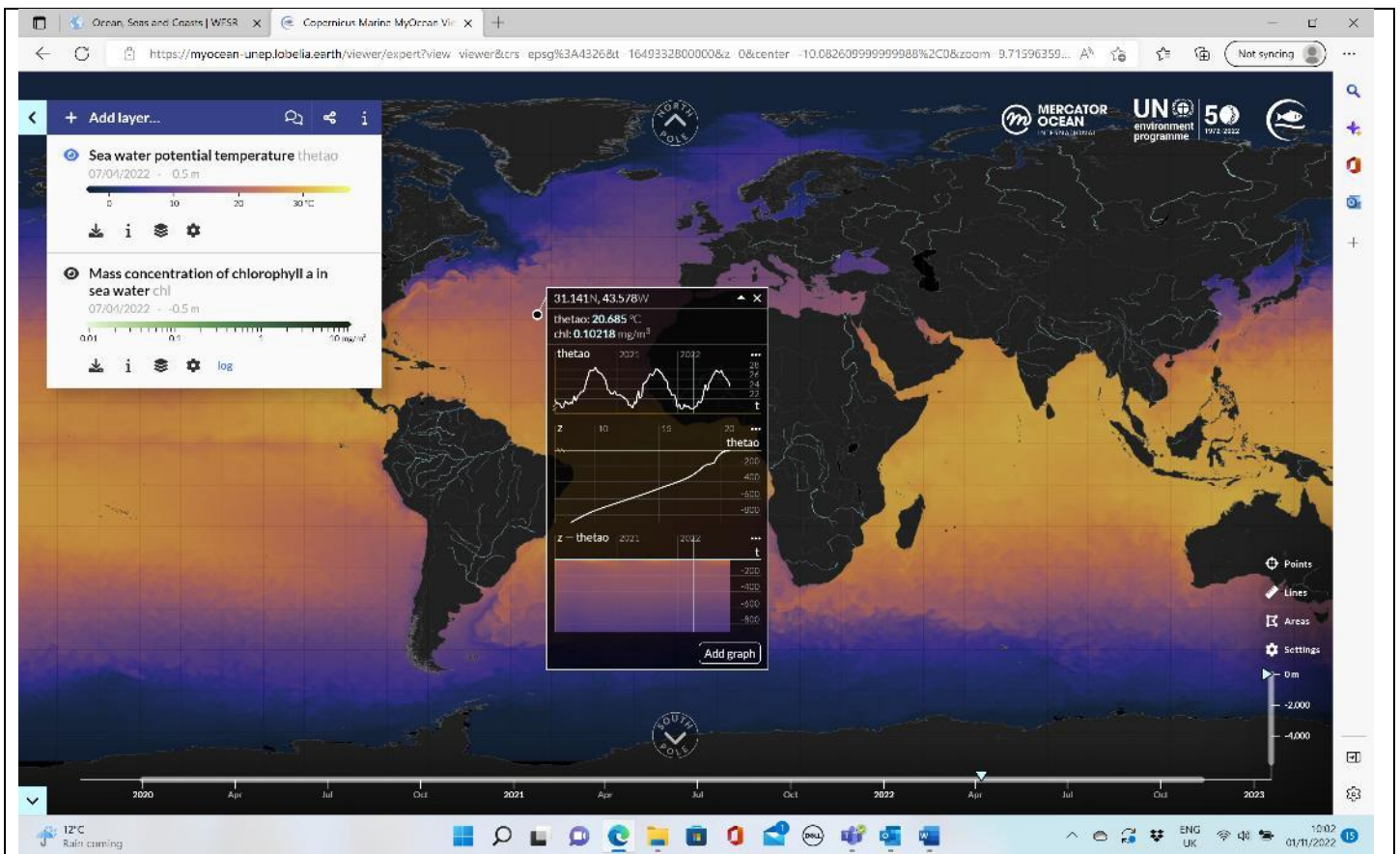
UNEP Regional Presence and Points of Contact are presented in the image below.

See here: <https://wedocs.unep.org/bitstream/handle/20.500.11822/35352/UNEPOrg.pdf>

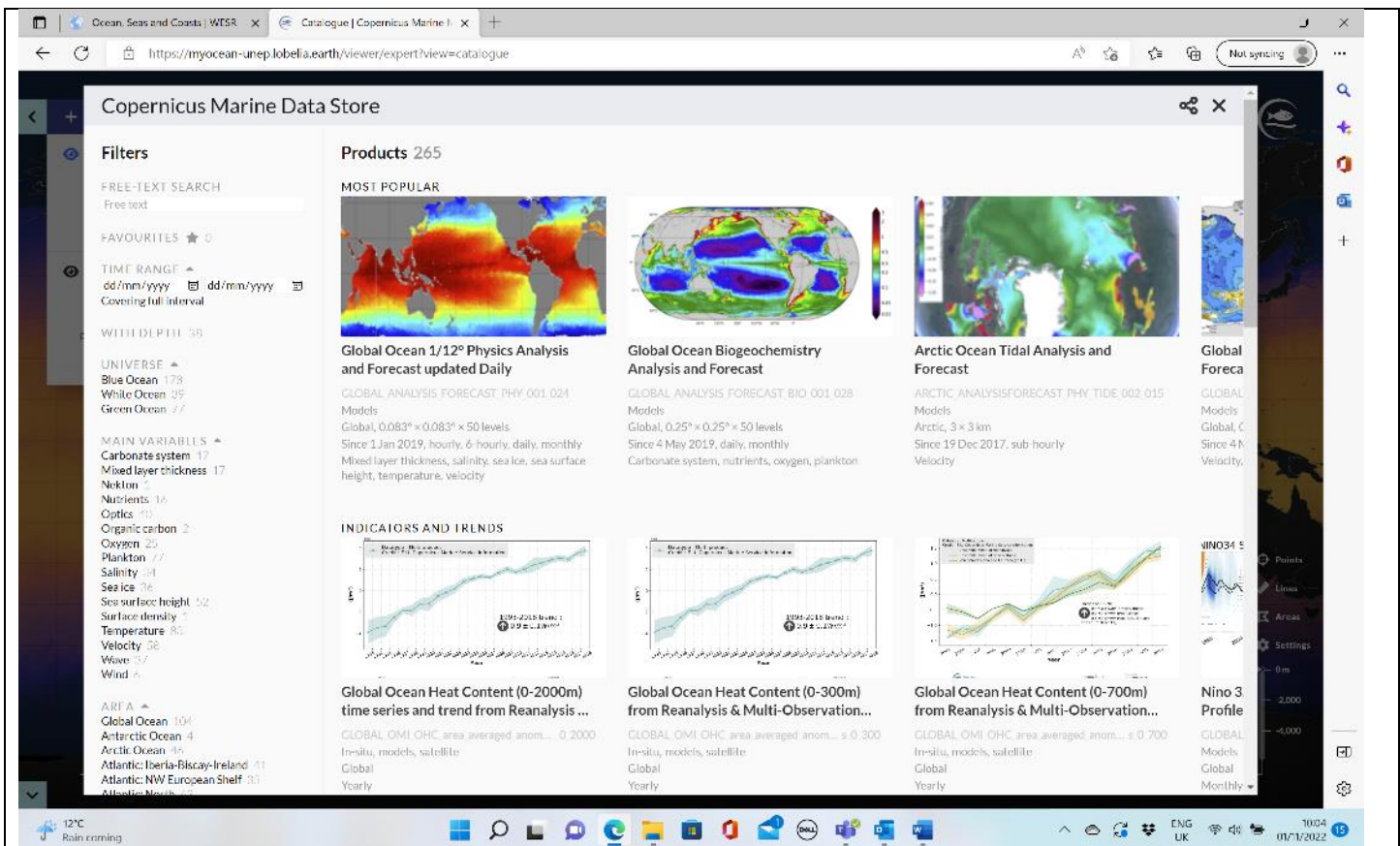


UNEP operates a World Environment Situation Room hosting and presenting Data, Information and Knowledge on the Environment, see here: <https://wesr.unep.org/>, including data, information and knowledge on ocean, seas and coasts, see here: <https://wesr.unep.org/article/ocean-seas-and-coasts>

UNEP promote the use of Copernicus MyOcean Service, see below:



Using information from satellite and in-situ observations as well as numerical models, the Copernicus Marine Service provides state-of-the-art analyses and forecasts daily, which offer the capability to observe, understand and anticipate the state of the marine environment. The Copernicus Marine Service is implemented by Mercator Ocean International on behalf of the European Commission.



Seabed 2030 Context:

The United Nations Environment Programme (UNEP) review findings / recommendations on the regionalisation topic, include:

- There is potential to access a range of thematic data sources via UNEP World Environment Situation Room hosting and presenting Data, Information and Knowledge on the Environment, and Copernicus Marine Data Store, as referenced / signposted by UNEP.
- Regional focal / contact points are potentially available for Seabed 2030 engagement (and UNEP Regional / Sub-Regional Directors are proposed entry POCs).
UNEP may potentially provide a useful Seabed 2030 benefits analysis use case detail – e.g., selected thematic programme contextual reference and/or grounding evidence.

3.5 REGIONAL SEGMENTATION ENTITY REVIEW - The United Nations Framework Convention on Climate Change (UNFCCC), including UN Climate Change Conferences (aka COP26/COP27, etc.)

This entity review is provided to provide an awareness of the global framework towards climate change.

Community Entity Name: The United Nations Framework Convention on Climate Change (UNFCCC), including UN Climate Change Conferences (aka COP26/COP27, etc.)	
Website URL	https://unfccc.int/
Headquarters (Address)	The secretariat of the United Nations Framework Convention on Climate Change is located in Bonn, Germany. Secretariat staff are housed at the UN Campus and Haus Carstanjen.
<p>Overview: The UNFCCC secretariat (UN Climate Change) is the United Nations entity tasked with supporting the global response to the threat of climate change. UNFCCC stands for United Nations Framework Convention on Climate Change. The Convention has near universal membership (198 Parties) and is the parent treaty of the 2015 Paris Agreement. The main aim of the Paris Agreement is to keep the global average temperature rise this century as close as possible to 1.5 degrees Celsius above pre-industrial levels. The UNFCCC is also the parent treaty of the 1997 Kyoto Protocol. The ultimate objective of all three agreements under the UNFCCC is to stabilize greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system, in a time frame which allows ecosystems to adapt naturally and enables sustainable development.</p> <p>Mission: Focusing in its early years largely on facilitating the intergovernmental climate change negotiations, the secretariat today supports a complex architecture of bodies that serve to advance the implementation of the Convention, the Kyoto Protocol, and the Paris Agreement.</p> <p>The secretariat provides technical expertise and assists in the analysis and review of climate change information reported by Parties and in the implementation of the Kyoto mechanisms. It also maintains the registry for Nationally Determined Contributions (NDC) established under the Paris Agreement, a key aspect of implementation of the Paris Agreement.</p> <p>The secretariat organizes and supports between two and four negotiating sessions each year. The largest and most important is the Conference of the Parties, held annually and hosted in different locations around the globe [Most recently November, 2021 - COP26 Glasgow, and forthcoming November 2022]. It is the largest annual United Nations conference, attended on average by around 25,000 participants. In addition to these major conferences, the secretariat organizes annual sessions of the so-called subsidiary bodies as well as a large number of meetings and workshops throughout the year.</p> <p>In recent years, the secretariat also supports the Marrakech Partnership for Global Climate Action, agreed by governments to signal that successful climate action requires strong support from a wide range of actors, including regions, cities, business, investors, and all parts of civil society. At UN Climate Change Conferences, a large number of events demonstrate how non-Party stakeholders are working with governments and the UN system to implement the Paris Agreement. In addition, the secretariat co-organizes regional Climate Weeks. The important events aim to drive forward Paris Agreement implementation at the regional level and to build new climate action partnerships.</p> <p>UNFCCC presents details on Climate Change Topics, including on Ocean, see here: https://unfccc.int/topics/ocean. Note a useful POC may be Peter Thomson who is UNSGs Special Envoy for the Ocean.</p> <p>Further potentially useful POCs include the members of the Ocean Decade advisory board, see here: https://www.oceandecade.org/decade-advisory-board/. The Decade Advisory Board is an advisory body to UNESCO's Intergovernmental Oceanographic Commission (IOC), the UN body tasked with coordinating the Ocean Decade, that will provide strategic advice on Decade implementation. Members are selected for a period of two years and serve in their individual capacities. [Please also see IOC UNESCO review above].</p>	

Regional Operating Model:

Around 450 staff are employed at UN Climate Change. Secretariat staff come from over 100 countries and represent a blend of diverse cultures, gender, and professional backgrounds.

Recent/current Annual UN Climate Change Conferences of the Parties are:

- The UK hosted the 26th UN Climate Change Conference of the Parties (COP26) in Glasgow on 31 October – 13 November 2021, see here: <https://ukcop26.org/>
- Egypt is hosting the 27th UN Climate Change Conference of the Parties (COP27) in Sharm El-Sheikh on 06 - 18 November 2022, see here: <https://cop27.eg/#/>. Note the United Nations Decade of Ocean Science for Sustainable Development (2021-2030) will be participating at COP27, the Ocean Decade will be hosting a series of events.

UNFCCC coordinates their work through Regional Collaboration Centres (RCCs). The RCCs were established to spread the benefits of the Clean Development Mechanism (CDM), which spurs investment in sustainable development by rewarding projects that reduce greenhouse gas emissions. Since adoption of the Paris Climate Change Agreement in December 2015, the RCCs have the broad task of supporting implementation of Nationally Determined Contributions under the agreement. Currently, UN Climate Change and its partner organizations operate six RCCs around the world.

- RCC Bangkok – Asia and the Pacific, see here: <https://unfccc.int/about-us/regional-collaboration-centres/regional-collaboration-centre-bangkok>
- RCC Dubai– Middle East, North Africa and South Asia, see here: <https://unfccc.int/about-us/regional-collaboration-centres/regional-collaboration-centre-for-the-middle-east-north-africa-and-south-asia>
- RCC Kampala – Eastern and Southern Africa, see here: <https://unfccc.int/about-us/regional-collaboration-centres/regional-collaboration-centre-kampala>
- RCC Lomé – Western and Francophone Africa, see here: <https://unfccc.int/about-us/regional-collaboration-centres/regional-collaboration-centre-lome>
- RCC Panama – Latin America, see here: <https://unfccc.int/about-us/regional-collaboration-centres/regional-collaboration-centre-panama>
- RCC St. George's – Caribbean, see here: <https://unfccc.int/about-us/regional-collaboration-centres/regional-collaboration-centre-st-george-s> [On the Island of Grenada]

Regional Map / Graphic (where readily available):

Not applicable.

Seabed 2030 Context:

The United Nations Framework Convention on Climate Change (UNFCCC), including UN Climate Change Conferences (aka COP26/COP27, etc.) review findings / recommendations on the regionalisation topic, include:

- This entity review is provided to provide an updated position / awareness of the Global UN Convention Framework on Climate Change.
- The Regional Collaboration Centre locations (No. 6) may provide a useful ongoing reference for ongoing Seabed 2030 watch on climate change matters / interests.
-

3.6 REGIONAL SEGMENTATION ENTITY REVIEW - United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP)

Community Entity Name: United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP)	
Website URL	https://www.unescap.org/#
Headquarters (Address)	The United Nations Building, Rajadamnern Nok Avenue, Bangkok 10200 Thailand
<p>Overview: The Economic and Social Commission for Asia and the Pacific (ESCAP) is the most inclusive intergovernmental platform in the Asia-Pacific region. The Commission promotes cooperation among its 53 member States and 9 associate members in pursuit of solutions to sustainable development challenges. ESCAP is one of the five regional commissions of the United Nations.</p> <p>The ESCAP secretariat supports inclusive, resilient, and sustainable development in the region by generating action-oriented knowledge, and by providing technical assistance and capacity-building services in support of national development objectives, regional agreements, and the implementation of the 2030 Agenda for Sustainable Development. ESCAP also provides support to partners at the national level. ESCAP's national offer is rooted in and linked with the implementation of global and regional intergovernmental frameworks, agreements, and other instruments.</p> <p>ESCAP pursues this objective by carrying out work, in close cooperation with other United Nations entities and intergovernmental organizations in the region, in the following eight areas:</p> <ol style="list-style-type: none"> 1. Macroeconomic Policy and Financing for Development 2. Trade, Investment & Innovation 3. Transport 4. Environment and Development 5. ICT and Disaster Risk Reduction 6. Social Development 7. Statistics, and 8. Energy 	
<p>Mission: UN ESCAP promotes cooperation among its 53 member States and 9 associate members in pursuit of solutions to sustainable development challenges</p>	
<p>Regional Operating Model:</p> <p>Given the vast coverage and diversity of the Asian-Pacific region, ESCAP's programme on subregional activities for development strengthens the Commission's presence and interventions at the subregional level in order to better target and deliver programmes that address specific key priorities, including poverty reduction and sustainable development, of member States in the respective subregions.</p> <p>The programme on subregional activities provides more focused and in-depth technical assistance to address key development challenges. Upon the request of member States, ESCAP provides through advisory services, organizes training workshops, and implements field projects. The subregional work also serves as a means of putting into action the analytical and normative work of ESCAP at the subregional and national levels.</p> <p>There are five Subregional Offices, including:</p> <ul style="list-style-type: none"> • The ESCAP Subregional Office for the Pacific - formerly known as ESCAP Pacific Operations Centre (EPOC), see here: https://www.unescap.org/subregional-office/pacific. This office is located in Suva, and covers: Australia, Fiji, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Zealand, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu, as well as American Samoa, the Cook Islands, French Polynesia, Guam, New Caledonia, Niue and the Northern Mariana Islands as associate members. • The ESCAP Subregional Office for East and North-East Asia (ESCAP-ENEA) is the subregional platform to build and strengthen multilateral partnerships and intergovernmental cooperation for inclusive and sustainable development and integration in Northeast Asia. This office is located in the 	

Republic of Korea and covers bridges the developing and developed countries in the subregion and works with six member States of ESCAP in the subregion, namely China, Democratic People's Republic of Korea, Japan, Mongolia, Republic of Korea, and Russian Federation, and two associate members, Hong Kong, China and Macao, China.

- The ESCAP Subregional Office for South and South-West Asia (ESCAP-SSWA) is the subregional platform to promote regional cooperation for inclusive and sustainable economic and social development in South and South-West Asia. This office is located in New Delhi, India and bridges the developing and developed countries in the subregion and works with ten member States in the subregion, namely Afghanistan, Bangladesh, Bhutan, India, the Islamic Republic of Iran, Maldives, Nepal, Pakistan, Sri Lanka, and Turkey.
- The ESCAP Subregional office for North and Central Asia, is based in Almaty, Kazakhstan, covers nine members, namely Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Russian Federation, Tajikistan, Turkmenistan, and Uzbekistan. All of these countries are economies in transition and seven are landlocked. Afghanistan participates in the work of the subregional office as a member of the United Nations Special Programme for the Economies of Central Asia (SPECA).
- The ESCAP Subregional Office for South-East Asia (SRO SEA) work covers Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, and Viet Nam. This office is located in Bangkok Thailand.

Additionally, the **group of countries in special situation in Asia and the Pacific** comprising least developed countries (LDCs), landlocked developing countries (LLDCs) and small island developing States (SIDS). These countries are home to more than 400 million people, a quarter of the total population of the Asia-Pacific developing countries excluding China and India. Their economies are marked by persistent structural development challenges, fluctuating economic growth and heavy dependence on a limited number of commodities or low wage manufactured products for export earnings. Of these Least developed Countries (LDCs) and Small island developing States (SIDS) are potentially of interest to Seabed 2030.

ESCAP has **five regional institutions** that support the substantive divisions of ESCAP in their goals. Each regional institute has a governing council. Governing councils are responsible for reviewing the institutes' administration and financial status; implementation of the programme of work; advising the institute directors on the formulation of the programme of work. Regional Institutions include:

1. Asian and Pacific Training Centre for Information and Communication Technology for Development, located in Incheon City, Korea, see here: <https://www.unapcict.org/>
2. Asian and Pacific Centre for Transfer of Technology, located in New Delhi, India, see here: <https://www.apctt.org/>
3. Asian and Pacific Centre for the Development of Disaster Information Management, located in Tehran, Islamic Republic of Iran, see here: <https://apdim.unescap.org/>
4. Centre for Sustainable Agricultural Mechanization, located in Beijing, China, see here: <https://www.un-csam.org/>
5. Statistical Institute for Asia and the Pacific, located in Makuhari, Chiba Prefecture, Japan, see here: <https://www.unsiap.or.jp/>

Regional Map / Graphic (where readily available):

Not readily available

Seabed 2030 Context:

The United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP) review findings / recommendations on the regionalisation topic, include:

- UN ESCAP provides a useful regionalization model to inform and potentially align with for Seabed 2030 regional benefit analysis (*Asia Pacific Region*), given this is the most inclusive intergovernmental platform in the Asia-Pacific region.
- Disaster Risk Reduction is a potential use case for inclusion in the Seabed 2030 benefits analysis use case portfolio, and this use case could be researched to focus on the Asia Pacific Region.

3.7 REGIONAL SEGMENTATION ENTITY REVIEW - United Nations Committee of Experts on Global Geospatial Information Management (UNGGIM - Statistics Division – *our interest being ‘maritime’ aspects of UNGGIM work*).

Community Entity Name: United Nations Committee of Experts on Global Geospatial Information Management (UNGGIM - Statistics Division, – <i>our interest being ‘maritime’ aspects of UNGGIM work</i>)	
Website URL	https://ggim.un.org/ and https://ggim.un.org/regional-entities/
Headquarters (Address)	Statistics Division United Nations, New York, NY 10017 United States of America E: statistics@un.org
<p>Overview: The United Nations Statistics Division is committed to the advancement of the global statistical system. The UN Statistics Division compile and disseminate global statistical information, develop standards and norms for statistical activities, and support countries' efforts to strengthen their national statistical systems. They facilitate the coordination of international statistical activities and support the functioning of the United Nations Statistical Commission as the apex entity of the global statistical system.</p> <p>The Statistics Division's main functions are:</p> <ul style="list-style-type: none"> • Data – Collection, processing, and dissemination of statistical information. • Methodology - Standardization of statistical methods, classifications, and definitions. • Capacity Development - Technical cooperation programme. • Coordination - Coordination of international statistical programmes and activities. <p>UNGGIM – was established and operates as the apex intergovernmental mechanism for making joint decisions and setting directions with regard to the production, availability, and use of geospatial information within national, regional, and global policy frameworks. Led by United Nations Member States, UN-GGIM aims to address global challenges regarding the use of geospatial information, including in the development agendas, and to serve as a body for global policymaking in the field of geospatial information management.</p> <p>UNGGIM operate the following 11 programmes:</p> <ul style="list-style-type: none"> • Strengthening geospatial information management • Contributions to the global geospatial information agenda • Nationally integrated geospatial information management • Geospatial information for Sustainable Development • Geodesy • Integration of statistical and geospatial information • Land administration and management • Geospatial information and services for disasters • Marine geospatial information • Policy and legal frameworks • Implementation of geospatial standards <p>The marine geospatial information programme is an engagement point for Seabed 2030. This programme is a Working Group on Marine Geospatial Information, see here: https://ggim.un.org/UNGGIM-wg8/</p> <p>The marine geospatial information programme is led by two co-chairs, (i) Singapore, Ms. Pearlyn Pang from Singapore Maritime, and Port Authority, and (ii) United States of America, Mr. John Nyberg from National Oceanic and Atmospheric Administration (NOAA).</p> <p>The Marine Geospatial Information current FY workplan can be found here: https://ggim.un.org/documents/WG-MGI_Draft_work_plan_2021-22.pdf</p>	

Additionally, and of relevance to Seabed 2030, the Marine Geospatial information programme are showing leadership on 'Readily Available and Accessible (Open) Marine Geospatial Information', see white paper here: https://ggim.un.org/meetings/GGIM-committee/10th-Session/documents/E-C.20-2020-31-Add_2-White-paper-on-readily-available-and-accessible-marine-geospatial-information-23Jul.pdf, which includes robust reference to GEBCO Seabed 2030.

Note also that elevation and depth is one of the UNGGIM 14 Global Fundamental Geospatial Data Themes, again noting reference is made to the global bathymetric dataset of the seas and oceans is maintained by the International Hydrographic Organization (IHO) in its Data Centre for Digital Bathymetry (IHO DCDB), which, in turn, supports the General Bathymetric Chart of the Ocean (GEBCO) project, and the reference to a set of relevant data standards which include:

- S-44 - IHO Standards for Hydrographic Surveys;
- S-57 - Transfer Standard for Digital Hydrographic Data;
- S-100 - IHO Universal Hydrographic Data Model; and,
- S-102 - Bathymetric Surface Product Specification.

Mission:

UNGGIM operate the following eleven programmes:

- Strengthening geospatial information management
- Contributions to the global geospatial information agenda
- Nationally integrated geospatial information management
- Geospatial information for Sustainable Development
- Geodesy
- Integration of statistical and geospatial information
- Land administration and management
- Geospatial information and services for disasters
- Marine geospatial information
- Policy and legal frameworks
- Implementation of geospatial standards

The marine geospatial information programme is the logical intersection point for Seabed 2030, which is a Working Group on Marine Geospatial Information, see here: <https://ggim.un.org/UNGGIM-wg8/>

The marine geospatial information programme is led by two co-chairs, (i) Singapore, Ms. Pearlyn Pang from Singapore Maritime, and Port Authority, and (ii) United States of America, Mr. John Nyberg from National Oceanic and Atmospheric Administration (NOAA).

The Marine Geospatial Information current FY workplan can be found here:

Additionally and of relevance to Seabed 2030, the Marine Geospatial information programme are leading on 'Readily Available and Accessible (Open) Marine Geospatial Information' approach, see white paper here: https://ggim.un.org/meetings/GGIM-committee/10th-Session/documents/E-C.20-2020-31-Add_2-White-paper-on-readily-available-and-accessible-marine-geospatial-information-23Jul.pdf, which includes robust reference to GEBCO Seabed 2030.

Note also that elevation and depth is one of the UNGGIM 14 Global Fundamental Geospatial Data Themes, see here: <https://ggim.un.org/documents/Fundamental%20Data%20Publication.pdf>, noting reference is made to the global bathymetric dataset of the seas and oceans as maintained by the International Hydrographic Organization (IHO) in its Data Centre for Digital Bathymetry (IHO DCDB), which, in turn, supports the General Bathymetric Chart of the Ocean (GEBCO) project, and with applicable reference to a set of relevant data standards which include:

- S-44 - IHO Standards for Hydrographic Surveys;
- S-57 - Transfer Standard for Digital Hydrographic Data;
- S-100 - IHO Universal Hydrographic Data Model; and,

- S-102 - Bathymetric Surface Product Specification.

Regional Operating Model:

UNGGIM includes participation by UN member states. There are subsidiary organisations: the two UN-Regional Cartographic Conferences for Asia and the Pacific and the Americas respectively; and the UN Conference on the Standardization of Geographical Names and its related Group of Experts.

Further, the establishment of a strong and operational regional infrastructure, composed of the five regional technical geospatial information committees that report to the Committee of Experts, recognize, and encapsulate the importance of strengthening coordination, capacity building and coherence of global geospatial information management, especially in developing countries. The five regional committees are:

- UN-GGIM Asia-Pacific
- UN-GGIM Americas
- UN-GGIM Arab States
- UN-GGIM Europe, and
- UN-GGIM Africa

And details of members state members, and committee and member state points of contact can be accessed here: <https://ggim.un.org/regional-entities/>

The (Global Scope Programme) **Marine Geospatial Information Programme** includes participation by the following (No. 25) member states: Algeria, Australia, Brazil, Canada, Chile, China, Denmark, Germany, Greece, Honduras, India, Italy, Jamaica, Korea (Republic of), Malaysia, Mexico, Netherlands, New Zealand, Norway, Oman, Saudi Arabia, Singapore, Tonga (Kingdom of), United Kingdom, and United States of America.

With additional participation by the following (No. 5) non-members states:

- International Hydrographic Organization
- UN Division for Ocean Affairs and Law of the Sea (OLA)
- Open Geospatial Consortium
- UN-GGIM: Private Sector Network (Esri, OceanWise)

Of potential further interest to Seabed 2030, a marine water quality can be found here:

https://unstats.un.org/unsd/envstats/fdes/MS1.3.3_Marinewaterquality.pdf . This manual has been elaborated by the Environment Statistics Section of the United Nations Statistics Division, in collaboration with the Expert Group on Environment Statistics. The Manual on the Basic Set of Environment Statistics consists of a series of methodology sheets for the collection or compilation of all environment statistics embedded in the Framework for Development of Statistics (FDES 2013), see here: <https://unstats.un.org/unsd/envstats/fdes.cshtml>

Regional Map / Graphic (where readily available):

Not applicable – this is a global Committee of Experts that meets annually. The Thirteenth Session of the United Nations Committee of Experts on Global Geospatial Information Management is scheduled to meet between 2 - 4 August 2023.

Seabed 2030 Context:

UN-GGIM **review findings / recommendations** on the regionalisation topic, include:

- Seabed 2030 has endorsed / engaging with UN-GGIM and its component Marine Geospatial Information Programme, the marine component of UN-GGIM.
- There is potential for Seabed 2030 to be informed and contribute to UN-GGIM International statistic systems and methods on marine environmental matters.
- There is potential for Seabed 2030 to be informed on relevant international standards on an ongoing basis via having a watch on UN-GGIM.
- UN-GGIM is well placed to be a focal point for gathering an understanding on the range of global authoritative geospatial data coverage and availability.

- UN-GGIM has in place points of contact in each member state, for regional committees, and the Marine Geospatial Information Programme on 'geospatial matters' which may be a useful entrance point in nations Seabed 2030 (where Seabed 2030 does not have existing POCs).

3.8 REGIONAL SEGMENTATION ENTITY REVIEW - The Organisation for Economic Co-operation and Development (OECD)

Community Entity Name: The Organisation for Economic Co-operation and Development (OECD)	
Website URL	https://www.oecd.org/
Headquarters (Address)	OECD 2, rue André Pascal 75016 Paris, France. Tel.: +33 1 45 24 82 00
<p>Overview: The Organisation for Economic Co-operation and Development (OECD) is an international organisation that works to build better policies for better lives. OECD goal is to shape policies that foster prosperity, equality, opportunity, and well-being for all. OECD draws on 60 years of experience and insights to better prepare the world of tomorrow.</p> <p>Together with governments, policy makers and citizens, OECD works on establishing evidence-based international standards and finding solutions to a range of social, economic, and environmental challenges. From improving economic performance and creating jobs to fostering strong education and fighting international tax evasion, we provide a unique forum and knowledge hub for data and analysis, exchange of experiences, best-practice sharing, and advice on public policies and international standard-setting.</p> <p>OECD provides a data portal, see here: https://data.oecd.org/, where interested parties can find, compare and share the latest OECD data: charts, maps, tables and related publications and 'search by' 'topic' or 'country'.</p> <p>Topics reflect areas of activity interest to OECD, and include:</p> <ul style="list-style-type: none"> • Agriculture, including fisheries. • Development • Economy • Education • Energy • Environment, noting this is where Ocean interests are addressed • Finance • Government <p>Further details and the potential interest areas for Seabed 2030 are presented in the Regional Operating Model table field further below.</p>	
<p>Mission:</p> <p>OECD operates based on a membership model. The OECD brings together Member countries and a range of partners that collaborate on key global issues at national, regional, and local levels. Through OECD standards, programmes and initiatives, OECD help drive and anchor reform in more than 100 countries around the world, building on their collective wisdom and shared values.</p> <p>Currently, OECD has 38 Member countries spanning the globe, from North and South America to Europe and Asia-Pacific. They are represented by ambassadors at the OECD Council, which defines and oversees OECD work, as set out in the OECD Convention. Member countries engage with OECD experts, use OECD data and analysis to inform policy decisions, and play a key role in the OECD country reviews, which are designed to encourage better performances. The European Commission participates in OECD work, but it does not have the right to vote.</p> <p>The 38 Member countries are: Australia, Austria, Belgium, Canada, Chile, Colombia, Costa Rica, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland,</p>	

Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Türkiye, United Kingdom, and United States.

Accession countries are pursuing OECD membership. Currently there are six Accession countries including: Argentina, Brazil, Bulgaria, Croatia, Peru, and Romania.

The OECD works closely with some of the world's largest economies: Brazil, China, India, Indonesia, and South Africa, and these are identified as **OECD Key Partners**.

Regional Operating Model:

OECD has 2 office locations (i) in Paris and (ii) in OECD Boulogne [Both France].

The OECD is represented outside of Paris by 'Centre's.' Centre's serve as regional contacts for the full range of OECD activities, from inquiries from the media, to liaison with governments, parliaments, business, labour, and civil society. Regional Centres are located in

- Berlin, see here: <https://www.oecd.org/berlin/>
- Mexico City, see here: <https://www.oecd.org/centrodemexico/>
- Tokyo, see here: <https://www.oecd.org/tokyo/>, and
- Washington, see here <https://www.oecd.org/washington/>

OECD Initiatives are presented by Region, including:

- Africa
- Eurasia
- Latin America
- Middle East and North Africa
- Southeast Asia
- Southeast Europe

Parent body and working group details and membership / applicable points of contact can be found here: <https://oecdgroups.oecd.org/Bodies/ListByNameView.aspx?book=true> Note there are groups on fisheries, shipbuilding, as example of 'ocean / blue economy' interests, and working party's as examples on 'biodiversity, water and ecosystems' and 'environmental information'.

The OECD works through more than 300 committees, expert and working groups which cover almost all areas of policy making. Our committees propose solutions, assess data and policy successes, and review policy actions among Member countries.

Of potential interest to Seabed 2030, the Ocean falls under the oversight of the Environment Directorate, see here: <https://www.oecd.org/ocean/>. Ocean is addressed by topic areas, based on:

Ocean economy & innovation, including:

- Ocean economy, science, technology, and innovation
- Developing countries and the ocean economy

Sectors, including:

- Sustainable and resilient fisheries and aquaculture
- Ocean shipping and shipbuilding

Environmental impacts, including:

- Ocean conservation and sustainable use
- Ocean pollution
- Climate change and the ocean

Further a range of Ocean data can be accessed here: <https://www.oecd.org/ocean/data/>

OECD Director points of contact can be accessed here: <https://www.oecd.org/about/document/photos-cv-directors.htm>, including Jo Tyndall, Director of the Environment Directorate.

Regional Map / Graphic (where readily available):

OECD Regional Initiatives locations are presented below, followed by member countries.

The screenshot shows the OECD website's 'Our global reach' section. The page features a world map with large green circles highlighting five regions: Latin America, Africa, Europe, Asia, and Australia. To the left of the map, the text reads: 'The OECD is at the heart of international co-operation. Our Member countries work with other countries, organisations and stakeholders worldwide to address the pressing policy challenges of our time.' Below this text is a 'FIND OUT MORE' button. At the bottom, there is an 'Explore map' section with two tabs: 'MEMBERS & PARTNERS' (selected) and 'BY KEY INITIATIVES'. Below the tabs are four cards: 'Member countries' (with a 'VIEW FULL LIST' link), 'OECD accession candidates' (with a 'VIEW FULL LIST' link), 'Key Partners' (with a 'VIEW FULL LIST' link), and 'Regional initiatives' (with a 'VIEW FULL LIST' link and a checkmark icon). The browser's address bar shows 'https://www.oecd.org/about/'. The Windows taskbar at the bottom displays the date as 01/11/2022 and the time as 13:31.

This screenshot shows the same OECD website page, but with the 'MEMBERS & PARTNERS' tab selected. The world map now displays numerous small blue dots representing member countries across all continents. The 'Regional initiatives' card in the 'Explore map' section now has a checkmark icon, while the other three cards ('Member countries', 'OECD accession candidates', and 'Key Partners') have empty circle icons. The rest of the page layout, including the text and the 'FIND OUT MORE' button, remains the same. The browser's address bar and the Windows taskbar are also visible, showing the same date and time as the first screenshot.

Seabed 2030 Context:

The Organisation for Economic Co-operation and Development (OECD) review findings / recommendations on the regionalisation topic, include:

- OECD is applicable more towards downstream benefit analysis interest, where the project will consider Ocean Economy 'sectors' rather than a focus for regionalisation (OECD being a collection of membership states).
- Seabed 2030 could potentially review / consider the various parent bodies and working groups of OECD, and engage any applicable points of contact towards Seabed 2030 awareness building and use of seabed mapping data towards OECD environmental information collation and review.
- Seabed 2030 could explore cooperation and potential support from OECD Environment Directorate regards Ocean thematic domain mutual interests.
- OECD may provide useful grounding evidence for the Seabed 2030 Value Proposition document (Benefit Analysis workstreams task 6.6).

3.9 REGIONAL SEGMENTATION ENTITY REVIEW - International Cable Protection Committee (ICPC)

Community Entity Name: International Cable Protection Committee (ICPC)	
Website URL	https://www.iscpc.org/
Headquarters (Address)	<p>International Cable Protection Committee 12 Fratton Road, Portsmouth, PO1 5BX United Kingdom General manager - Mr. Ryan Wopschall. Tel: +1 541-306-1549 E-mail : general.manager@iscpc.org LinkedIn: https://www.linkedin.com/company/icpc-ltd/ Further POCs include:</p> <ul style="list-style-type: none"> • Chair: EGS - Current Representative Mr Graham Evans • Vice Chair: Basslink - Current Representative Mr Malcolm Eccles • Company Secretary: Current Representative Mr Ryan Wopschall
<p>Overview: The International Cable Protection Committee (ICPC) was founded in 1958 and its Membership comprises of governmental administrations and commercial companies that own or operate submarine telecommunications or power cables, as well as other companies that have an interest in the submarine cable industry—including most of the world's major cable system owners and cable ship operators.</p> <p>The primary purpose of the ICPC is to help its Members to improve the security of undersea cables by providing a forum in which relevant technical, legal, and environmental information can be exchanged.</p>	
<p>Mission: The primary purpose of the ICPC is to help its Members to improve the security of undersea cables by providing a forum in which relevant technical, legal, and environmental information can be exchanged.</p> <p>Prime Activities of the ICPC include:</p> <ul style="list-style-type: none"> • Promote awareness of submarine cables as critical infrastructure to governments and other users of the seabed. • Establish internationally agreed recommendations for cable installation, protection, and maintenance. • Monitor the evolution of international treaties and national legislation and help to ensure that submarine cable interests are fully protected. • Liaison with UN Bodies. <p>The vision of the ICPC is to "be the recognised Guardian of Subsea Cable Infrastructure, providing leadership, guidance and a voice for the industry."</p>	
<p>Regional Operating Model: ICPC is a membership organisation, funded by its membership, as follows: Funding: £2500 GBP for Full Membership and £2200 GBP for Associate and Government Membership As of October 2022 the ICPC membership comprises more than 185 Members from more than 65 countries/territories.</p> <p>Current members (191 members details (by country and entity name), with their respective URL links can be accessed here: https://www.iscpc.org/about-the-icpc/member-list/</p> <p>Membership is available to Submarine Cable Owners, Submarine Cable Maintenance Authorities, Submarine Cable System Manufacturers, Cable Ship Operators, Submarine Cable Route Survey Companies and Governments. Associate Membership is available to any organisation or individual that has an interest in the submarine cable industry, wishes to be informed about its development and wants to support the ICPC in achieving its goals.</p> <p>ICPC promote the following data sourcing links:</p> <p>https://www.iscpc.org/information/marine-resources/oceans-seabed/, where a range of seabed related data can be accessed, including GEBCO, and links to Oceanographic Institutions and Agencies.</p>	

<https://www.iscpc.org/information/cable-data/>, where cable data/details on 2 categories of cables can be accessed, including (i) telecommunications cables, (ii) power cables, and (iii) scientific cables.

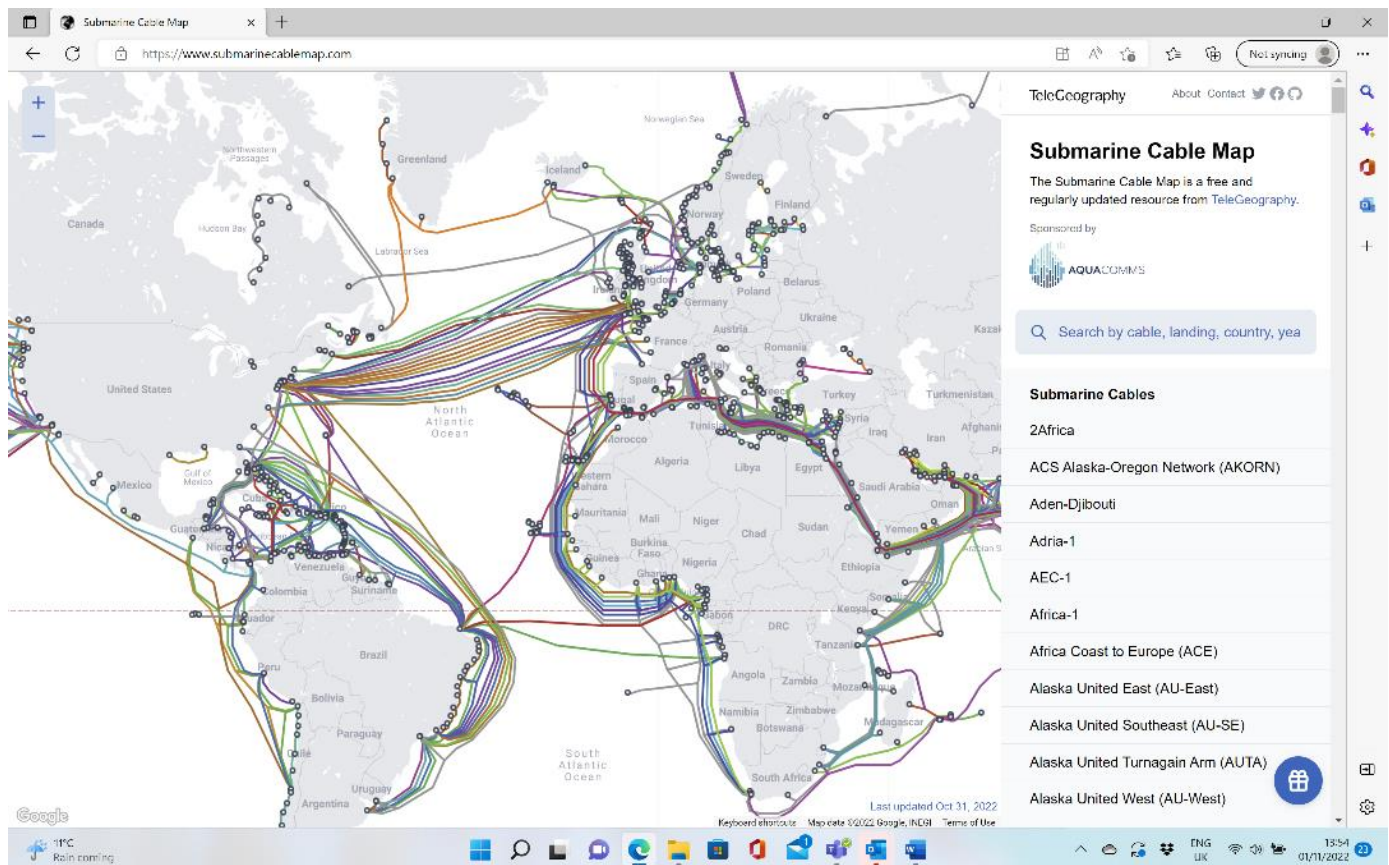
<https://www.submarinecablemap.com/>, This Submarine Cable Map is a free and regularly updated resource from TeleGeography, see example below. The map includes the following data points about each submarine cable shown:

- #Official submarine cable system name
- #Ready for service date (RFS)
- #Cable system length in kilometers
- #Owners of the system
- #Suppliers that laid down the submarine cable
- #Official URL of the system
- #Landing points

Regional Map / Graphic (where readily available):

Not applicable in terms of ICPC regional operating model. However the view of the submarinecablemap.com is useful for Seabed 2030, which is managed by company Telegeography, see here:

https://www2.telegeography.com/?_hstc=196094579.6c8e6c5611d8d401881bc7481093b319.1667310843076.1667310843076.1667310843076.1&_hssc=196094579.1.1667310843076&_hsfp=1794810531



The cables routes on the Submarine Cable Map are stylized and do not reflect the actual path taken by the various systems. This design approach makes it easy to visually follow the different cables and the points at which they land. In real life, cables that cross similar areas of an ocean, take very similar paths. These paths are chosen via comprehensive marine surveys which select routes that avoid hazardous conditions that could potentially damage a cable.

A GitHub page [see here: <https://github.com/telegeography/www.submarinecablemap.com>] explains how users can download the data and make your own version of the map. Please note: the data as-is and under the Creative Commons Share alike, non-commercial license. If users wish to license the data for commercial purposes, engagement is required to Telegeography sales team [Email: sales@telegeography.com]

Seabed 2030 Context:

International Cable Protection Committee (ICPC) review findings / recommendations on the regionalisation topic, include:

- ICPC is a useful channel for sourcing submarine cable map data (including details on 3 types of cable).
- Potential for Seabed 2030 engagement with the ICPC membership to promote, engage with and build ongoing awareness of Seabed 2030.
- ICPC is a candidate for WITS benefit analysis workstream to engage with ICPC to develop one of the Seabed 2030, Seabed Mapping use cases (Benefits analysis workstream Task 6.4).

3.10 REGIONAL SEGMENTATION ENTITY REVIEW – Nippon Foundation

Community Entity Name: Nippon Foundation	
Website URL	https://www.nippon-foundation.or.jp/en/
Headquarters (Address)	The Nippon Zaidan Building 1-2-2 Akasaka, Minato-ku Tokyo 107-8404, Japan TEL : +81-3-6229-5111 FAX : +81-3-6229-5110
<p>Overview:</p> <p>The Nippon Foundation was established by Ryoichi Sasakawa in 1962 as the Japan Shipbuilding Industry Foundation, to promote the reconstruction of postwar Japan through the development of the shipbuilding and shipping industries. Over the years, the Foundation's activities in Japan expanded to include projects that support health and hygiene, and firefighting and disaster preparedness. The Foundation also became active in areas including food security in Africa and the elimination of leprosy, and continues to engage in these activities today. In December 1995, author and philanthropist Ayako Sono succeeded Mr. Sasakawa as the Foundation's second chair. At that time, the Foundations primary activities were supporting grassroots volunteer groups and NGOs, which had just begun to develop in Japan in the wake of the Great Hanshin-Awaji Earthquake of 1995. The Foundation also began working to ensure inclusive communities through improved social welfare services for older persons and activities to empower persons with disabilities. In keeping with The Nippon Foundation's original focus on ocean-related issues, projects to maintain navigational safety in the Straits of Malacca and Singapore, and fellowship programs to cultivate leaders in ocean-related fields, were expanded. In July 2005, following Ms. Sono's retirement at the end of her term, Yohei Sasakawa, then serving as president, assumed the position of chair. Continuing its humanitarian and maritime projects, The Nippon Foundation is also taking up new challenges in promoting social innovation. We are working together with various stakeholders to formulate the multifaceted approaches required to address increasingly complex global issues.</p> <p>Nippon Foundation (NF) categorize what the Foundation does by (i) Projects, (ii) Scholarships and Fellowships, and (iii) Grant Programs, including:</p> <p><i>Projects</i> – where NF activities span numerous fields and are global in scope. Projects pursued by NF on an ongoing basis, reflect seven fields of activity:</p> <ol style="list-style-type: none"> 1. Enhancing Communities, 2. Enriching Culture, 3. Forging Global Ties, 4. In the cause of Life, 5. The Future of Our Ocean, 6. A Future for Youth, and, 7. Toward Human Security. <p>Additional to and of potential relevance to Seabed 2030, Nippon Foundation is supporting the delivery of three ocean/maritime interest projects:</p> <ol style="list-style-type: none"> 1. The Nippon Foundation MEGURI2040 Fully Autonomous Ship Program, which is aiming to implement fully autonomous navigation to support the ocean of the future, see here: https://www.nippon-foundation.or.jp/en/what/projects/meguri2040 2. The Nippon Foundation Ocean Innovation Consortium, which is a program to train marine resource development engineers across Japan, see here: https://www.nippon-foundation.or.jp/en/what/projects/ocean_innovation, and here: https://project-kaiyoukaihatsu.jp/english/ 3. Internal to Japan, the Nagisa-no-Koban (Seaside Patrol Stations) Project, promoting a series of regional project and facilities towards 'Making a Clean Ocean that Can Be Enjoyed Safely with Peace of Mind', see here: https://www.nippon-foundation.or.jp/en/what/projects/policeoffice <p><i>Scholarships and Fellowships</i></p>	

The Nippon Foundation does not conduct its own scholarship programs. NF fund a number of programs through different organizations, including

(i) Worldwide Scholarships and Fellowships, and

(ii) Maritime Scholarships and Fellowships – here NF provide a set of Scholarships and Fellowships for Global Ocean Issues, and these are located globally as follows:

- WMU Sasakawa Fellowship, World Maritime University (Sweden), see here: <http://www.wmujapan.net/>
- Capacity Building and Network Development at IAMU, International Association of Maritime Universities (Japan), see here: <http://iamu-edu.org/>
- NF-IMLI Fellowship Program, International Maritime Law Institute (Malta), see here: <http://www.imli.org/programmes-and-courses/ilm-programme>
- NF-GEBCO Training Project, GEBCO Guiding Committee (United States), see here: http://www.gebco.net/training/training_project/
- NF-POGO Centre of Excellence in Observational Oceanography, Partnership for Observation of the Global Ocean (UK), see here: <https://pogo-ocean.org/capacity-development/centre-of-excellence/>
- NF-SIRC Fellowship, Seafarers International Research Centre, Cardiff University (UK), see here: http://www.sirc.cf.ac.uk/SIRC-NF_Home.aspx
- NF-UN Partnership Training Program on Ocean Affairs and the Law of the Sea, Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs (United States), see here: <http://www.un.org/depts/los/nippon/>
- NF-ITLOS Fellowship Program, International Tribunal for the Law of the Sea (Germany), see here: <https://www.itlos.org/the-registry/training/itlos-nippon-foundation-capacity-building-and-training-programme>
- Nereus Program, University of British Columbia (Canada), see here: <http://www.nereusprogram.org/>
- NF-IHO CHART Program, International Hydrographic Organization (Monaco), see here: http://www.iho.int/mtg_docs/CB/Special-Projects/Webpage-JCBP/CHART_outline.html

Grant Programs

NF share resources with actors working around the world to improve society. This is mainly through the Scholarships and Fellowships presented above. Alternative grant applications can be made via <https://www.nippon-foundation.or.jp/en/contact>

Mission: Nippon Foundation mission is social innovation.

Through this innovation Nippon Foundation aim to achieve a society where all people support one another, reducing the burdens and challenges they face together.

Everyone has a role to play: citizens, corporations, nonprofit organizations, governments, and international bodies. By forging networks among these actors, The Nippon Foundation serves as a hub for the world's wisdom, experience, and human resources, giving individuals the capacity to change society—the hope that they can make a difference.

Nippon Foundation goal is to give all of humanity the chance to participate in creating our future.

Regional Operating Model:

Nippon Foundation does not have a network of global offices with global footprint aligned with project, scholarship, and fellowship delivery network locations. Yohei Sasakawa, Nippon Foundation Chairman makes reference in his Chairmans message to "The Nippon Foundation's most valuable asset is the network of people and organizations that we have created through our activities over the past fifty years. We know from experience that bringing people together creates synergies.

Our priority is solving actual problems on the ground. We engage in lively discussions with nonprofit organizations, corporations, governments, international organizations, researchers, and volunteers to arrive at possible solutions, and to initiate and implement projects."

Through reference to projects and scholarships/fellowships delivery details above Nippon Foundation can potentially leverage a global footprint network including where the emphasis / track record is / has been on 'oceans / maritime domain': Japan, USA, Canada, UK, Sweden, Malta, Germany, and Monaco in addition to Seabed 2030 regional center presence.

The Ocean Innovation Consortium, where the Nippon Foundation as facilitator role and in collaboration with Consortium Members and other stakeholders as well as the Ministry of Land, Infrastructure, Transport and Tourism provides an extensive international delivery network. As of July 22nd, 2021, the Consortium is partnered with over 55 organizations - 22 companies, 28 universities, 4 national research institutes, and 1 non-profit organization, including global capacity building and R&D delivery track record in USA, UK, and Norway as example footprint locations, among others.

Regional Map / Graphic (where readily available):

Not applicable – through reference to projects and scholarships/fellowships details above Nippon Foundation can potentially leverage a global network of delivery including 'oceans / maritime domain' drawn from: Japan, USA, Canada, UK, Sweden, Malta, Germany, and Monaco in addition to Seabed 2030 regional presence.

Seabed 2030 Context:

- Noted, that Nippon Foundation is the Seabed 2030 Lead Sponsor.
- Nippon Foundation Institution review findings / recommendations on the regionalisation topic, include:
- Useful to be aware of Nippon Foundation programme delivery track record / locations footprint, including Japan, USA, Canada, UK, Sweden, Malta, Germany, and Monaco as ocean / maritime 'delivery locations' in addition to Seabed 2030 regional office footprint. These may provide opportunities to link up in local geographies on Seabed 2030 mission.
 - Nippon Foundation provides potentially useful background, track record and delivery locations towards informing/supporting any future Seabed 2030 capacity building interests/initiatives.

SECTION FOUR: SEABED 2030 REGIONAL SEGMENTATION BENEFITS ANALYSIS PROPOSED GEOSPATIAL REFERENCE DATA

This section presents a target set of geospatial reference data to support the Seabed 2030 Regional segmentation for the primary purpose of seabed mapping benefits analysis.

4.1 Set of Proposed Seabed Mapping Benefits Analysis Regional Segmentation Geospatial Reference Data

This section presents a list of a proposed set of geospatial reference data to support Seabed 2030's regional segmentation for the primary purpose of seabed mapping benefits analysis, and (subject to further development during FY2023) to be potentially useful towards supporting future Seabed 2030 seabed mapping prioritisation decision-making.

Identified geospatial reference data include:

#Data Category 1: [Proposed] Seabed Mapping Benefits Analysis Regional Segmentation Geospatial Reference Data:

Part A: Waters / Maritime Boundaries of Interest Waters of Interest to the Benefit Analysis

- #Coast [Baseline]
- #High Sea Area Extents (Boundary(s))
- #EEZ (Boundary(s)) (12 - 200 nm)
- #EEZ - Extension to continental shelf (Boundary(s)), where recognised internationally, e.g., 200 - 350 nm
- #Archipelagic Waters
- #Contiguous Zone (12 - 24 nm)
- #Territorial Seas (0 - 12 nm)
- #Ports
- #Internal Waters - Inland water bodies / Navigable waterways

Part B: Other maritime / marine area boundary driven concerns or interests

- #Areas of particular Environmental Interest Area Extents (Boundary(s))
- #Vulnerable Marine Ecosystem Extents (Boundary(s))
- #Sensitive Sea Areas and Areas to be Avoided (Boundary(s))
- #Major Fishing Areas, Fisheries Closures and Fisheries Restricted Areas (Boundary(s))
- #Whale Sanctuaries Area Extents (Boundary(s))
- #Infrastructure Closures Area Extents (Boundary(s))
- #World Heritage Sites, including those for their mixed cultural and natural outstanding value (Boundary(s))
- #Marine Protected Areas (Boundary(s))
- #Special Areas and Emissions Control Areas (Boundary(s))
- #Others TBD

Part C: Ocean Regions and Sea Basins

- #Ocean Regions [Boundaries]
- #Ocean and Sea Regions [Boundaries]

Part D: Seabed 2030 Global and Regional Center Locations and Operating Boundary(s) Extents

#Seabed 2030 Global Center Location - The Global Center for The Nippon Foundation-GEBCO
Seabed 2030 Project
#Seabed 2030 Regional Center 1: Southern Ocean Regional Center Location and Operating Boundary
#Seabed 2030 Regional Center 2: Atlantic and Indian Oceans Regional Center Location and Operating Boundary
#Seabed 2030 Regional Center 3: Arctic and North Pacific Ocean Regional Center Location and Operating Boundary
#Seabed 2030 Regional Center 4: South and West Pacific Ocean Regional Center Location and Operating Boundary
#The International Hydrographic Organization Data Center for Digital Bathymetry (IHO-DCDB) Location and Operating Boundary (s) if applicable

Part E: Base Mapping (Topography, etc.)

#OpenSeaMap
#OpenStreetMap

Part F: Reference Grids - Tiles

- *The longitude and latitude grid system*
- *AORA: 400 km x 400 km grid*
- *Future TBD - Note to reviewer: Paul will be updating grid details following engagement with Sam Harper*

Part G - Target Depth Range (Approximated)

#Target Approximated Sea Areas Extents with Depth range 0 - 1500 metres
#Target Approximated Sea Areas Extents with Depth range 1500 - 3000 metres
#Target Approximated Sea Areas Extents with Depth range 3000 - 5750 metres
#Target Approximated Sea Areas Extents with Depth range 5750 - 11000 metres

Data description details are presented by dedicated table (extract presented in section 4.2 below, and include the following data description fields:

#Data Category
#Unique ID
#Data Title / Name
#Data Description
#"Priority (MoSCoW)"
#Data Type
#Comment

Data description details that are not readily available are identified as 'Future TBD,' and will be iteratively updated throughout the Phase 3 project phase, and then during the proposed and future planned seabed mapping prioritisation tool activities, scheduled for delivery across FY 2023.

#Data Category 2: Seabed 2030 Seabed Mapping New AOI [User defined]

This includes geographic area data [Spatial Extents] for new seabed mapping user requests / needs to inform Seabed 2030 seabed mapping benefits analysis and prioritisation.

#Data Category 2: Seabed 2030 Seabed Mapping New AOI [User defined]

#Data Category 3: Seabed 2030 Seabed Mapping Production Data Extents [Production Progress Tracking Data to Inform Seabed Mapping Prioritisation Decision Making]

This includes geographic area data [Spatial Extents] for new seabed mapping data acquisition planning, commissioning and new seabed mapping data acquisition and production progress tracking.

Seabed 2030 Data Coverage - Data Catalogue of areas already mapped.

Including minimum:

##Seabed mapping data area extents (Existing data / data products only*).

##Seabed mapping data currency (Date of acquisition).

##Seabed mapping data product specification (grid product, chart, depth, resolution, etc.).

##Seabed mapping available data format (any options or constraints)."

#Seabed 2030 Regional Center 1: Forward Planning Data for new seabed mapping data acquisition and production [Quarterly and Annual Forward Plan Granularity]

#Seabed 2030 Regional Center 2: Forward Planning Data for new seabed mapping data acquisition and production [Quarterly and Annual Forward Plan Granularity]

#Seabed 2030 Regional Center 3: Forward Planning Data for new seabed mapping data acquisition and production [Quarterly and Annual Forward Plan Granularity]

#Seabed 2030 Regional Center 4: Forward Planning Data for new seabed mapping data acquisition and production [Quarterly and Annual Forward Plan Granularity]

#Seabed 2030 Global Center: Forward Planning Data for new seabed mapping data acquisition and production [Quarterly and Annual Forward Plan Granularity]

#New seabed mapping data acquisition planning, pending authority to proceed and commissioning. Including: [By region attributed]

##1: New data acquisition request is in planning,

##2: New data acquisition request proposal submitted and pending authority to proceed,

##3: New data acquisition request proposal submitted, authority to proceed issued, and pending commissioning with supplier.

#New seabed mapping data acquisition activated task orders with supplier in production, including: [By data product specification (based on depth and resolution), including: [By Region attributed]

##1: progress reporting (commissioned, in survey permissions phase),

##2: in data capture / acquisition phase,

##3: data acquired,

##4: data in processing/production phase,

##5: data produced in post-processing & QC,

##6: data produced / available (in production house data store)

##7: data uploaded / published to GEBCO / Seabed 2030 data store

4.2 Table of Proposed Seabed Mapping Benefits Analysis Regional Segmentation Geospatial Reference Data – Data Descriptions

This section presents a table of data descriptions for the set of geospatial reference data identified in section 4.1 above and proposed to support the regional segmentation for the primary purposes of seabed mapping benefits analysis, and to further be potentially useful towards supporting future Seabed 2030 seabed mapping prioritisation decision-making.

Data description details including the following fields:

- #Data Category
- #Unique ID
- #Data Title / Name
- #Data Description
- #"Priority (MoSCoW)"
- #Data Type
- #Comment

Data description details that are not readily available are identified as 'Future TBD,' and are proposed to be finalised during the proposed / future planned seabed mapping prioritisation tool activities, scheduled in for delivery across FY 2023.

A current state version of the data table is embedded here with extracts copied further below.



Seabed 2030
Seabed Mapping Ber

The master version of the data table can be found in the Seabed 2030 SharePoint directory at the following URL location: *Future TBD – Note to reviewer: Paul will insert data collation SharePoint folder location URL later during project delivery.*

Collated data (e.g., those that have been readily available / provided can be found in the Seabed 2030 SharePoint directory at the following URL location: *Future TBD – Note to reviewer: Paul will insert data collation SharePoint folder location URL later during project delivery.*

Data Table Worksheet 1 - Revision History & Related Documents

Seabed 2030 WITS Phase 3 Project

Seabed 2030 Seabed Mapping Benefits Analysis_Regional Segmentation Data Requirements Table

Task 6.1 Support Seabed 2030 to adopt a 'Regional Segmentation' of the Global Oceans into Regional Areas of Interest for the purposes of benefits analysis and seabed mapping prioritisation.

Addressing two sets of key data requirements for Seabed 2030 Benefits Analysis and Seabed Mapping Prioritisation, including:

#Data Category 1: [Proposed] Seabed Mapping Benefits Analysis Regional Segmentation Geospatial Reference Data

#Data Category 2: Seabed 2030 Seabed Mapping New AOI [User defined]

#Data Category 3: Seabed 2030 Seabed Mapping Production Data Extents [Production Progress Tracking Data to Inform Seabed Mapping Prioritisation Decision Making]

Version

V1.0

Author

P.Gray

Date

31/10/2022

Project

Seabed 2030 WITS Phase 3 Project [Benefits Analysis Workstream]

I. Revision History

Revision number	Revision Date	Author	Summary of Changes
v1.0 DRAFT	31/10/2022	P. Gray	Data Requirements Workbook set up and 1st pass population with data requirements mapped across from the Seabed 2030 WITS Phase 2 Outputs and updated for the WITS Phase 3 benefits analysis workstream task 6.1 review work
TO BE UPDATED POST COMMUNITY FEEDBACK	30/11/2022	P. Gray	Updated based on Seabed 2030 Management and Data Centre Heads feedback received during WITS Phase 3 delivery

II. Related Documents

Document Name	Date	Author	Location
NLA International–Seabed 2030 Phase 2: Benefits Analysis Workstream Report - Catalogue of Premium Models for Seabed Mapping Benefits Analysis	January, 2022	P. Gray / G. Hesling	Available on Project SharePoint
NLA International–Seabed 2030 Phase 2: Benefits Analysis Workstream Report - Proposed model for Seabed 2030 – Seabed Mapping Benefits Analysis and Prioritisation April 2022	April, 2022	P. Gray / G. Hesling	Available on Project SharePoint

Data Table Worksheet 2 - #Data Category 1: [Proposed] Seabed Mapping Benefits Analysis Regional Segmentation Geospatial Reference Data – Data Descriptions

Seabed 2030 WITS Phase 3 Project

Seabed 2030 Seabed Mapping Benefits Analysis, Regional Segmentation Data Requirements Table

WITS Category 1: Proposed Seabed Mapping Benefits Analysis Regional Segmentation Geospatial Reference Data

Data Descriptions

Phase code: WITS-2030-01, WITS-2030-02, WITS-2030-03, WITS-2030-04, WITS-2030-05, WITS-2030-06, WITS-2030-07, WITS-2030-08, WITS-2030-09, WITS-2030-10, WITS-2030-11, WITS-2030-12, WITS-2030-13, WITS-2030-14, WITS-2030-15, WITS-2030-16, WITS-2030-17, WITS-2030-18, WITS-2030-19, WITS-2030-20, WITS-2030-21, WITS-2030-22, WITS-2030-23, WITS-2030-24, WITS-2030-25, WITS-2030-26, WITS-2030-27, WITS-2030-28, WITS-2030-29, WITS-2030-30, WITS-2030-31, WITS-2030-32, WITS-2030-33, WITS-2030-34, WITS-2030-35, WITS-2030-36, WITS-2030-37, WITS-2030-38, WITS-2030-39, WITS-2030-40, WITS-2030-41, WITS-2030-42, WITS-2030-43, WITS-2030-44, WITS-2030-45, WITS-2030-46, WITS-2030-47, WITS-2030-48, WITS-2030-49, WITS-2030-50, WITS-2030-51, WITS-2030-52, WITS-2030-53, WITS-2030-54, WITS-2030-55, WITS-2030-56, WITS-2030-57, WITS-2030-58, WITS-2030-59, WITS-2030-60, WITS-2030-61, WITS-2030-62, WITS-2030-63, WITS-2030-64, WITS-2030-65, WITS-2030-66, WITS-2030-67, WITS-2030-68, WITS-2030-69, WITS-2030-70, 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WITS-2030-931, WITS-2030-932, WITS-2030-933, WITS-2030-934, WITS-2030-935, WITS-2030-936, WITS-2030-937, WITS-2030-938, WITS-2030-939, WITS-2030-940, WITS-2030-941, WITS-2030-942, WITS-2030-943, WITS-2030-944, WITS-2030-945, WITS-2030-946, WITS-2030-947, WITS-2030-948, WITS-2030-949, WITS-2030-950, WITS-2030-951, WITS-2030-952, WITS-2030-953, WITS-2030-954, WITS-2030-955, WITS-2030-956, WITS-2030-957, WITS-2030-958, WITS-2030-959, WITS-2030-960, WITS-2030-961, WITS-2030-962, WITS-2030-963, WITS-2030-964, WITS-2030-965, WITS-2030-966, WITS-2030-967, WITS-2030-968, WITS-2030-969, WITS-2030-970, WITS-2030-971, WITS-2030-972, WITS-2030-973, WITS-2030-974, WITS-2030-975, WITS-2030-976, WITS-2030-977, WITS-2030-978, WITS-2030-979, WITS-2030-980, WITS-2030-981, WITS-2030-982, WITS-2030-983, WITS-2030-984, WITS-2030-985, WITS-2030-986, WITS-2030-987, WITS-2030-988, WITS-2030-989, WITS-2030-990, WITS-2030-991, WITS-2030-992, WITS-2030-993, WITS-2030-994, WITS-2030-995, WITS-2030-996, WITS-2030-997, WITS-2030-998, WITS-2030-999, WITS-2030-1000, WITS-2030-1001, WITS-2030-1002, WITS-2030-1003, WITS-2030-1004, WITS-2030-1005, WITS-2030-1006, WITS-2030-1007, WITS-2030-1008, WITS-2030-1009, WITS-2030-1010, WITS-2030-1011, WITS-2030-1012, WITS-2030-1013, WITS-2030-1014, WITS-2030-1015, WITS-2030-1016, WITS-2030-1017, WITS-2030-1018, WITS-2030-1019, WITS-2030-1020, WITS-2030-1021, WITS-2030-1022, WITS-2030-1023, WITS-2030-1024, WITS-2030-1025, WITS-2030-1026, WITS-2030-1027, WITS-2030-1028, WITS-2030-1029, WITS-203

Data Table Worksheet 3 - #Data Category 2: Seabed 2030 Seabed Mapping New AOI [User defined]

Seabed 2030 WITS Phase 3 Project						
Seabed 2030 Seabed Mapping Benefits Analysis_Regional Segmentation Data Requirements Table						
#Data Category 2: Seabed 2030 Seabed Mapping New AOI [User defined]						
Version: v1.0						
Date: 31-Oct-22						
Please note: Items identified as 'TBC' are To Be Determined, e.g. to take account of ongoing stakeholder engagement guidance and feedback, and/or future next level design decisions to be progressed during FY 2023 [Seabed Mapping Prioritisation Toolkit Design Activities]						
Data Category	Unique ID	Data Title / Name	Data Description	Priority (MoSCoW)	Data Type	Comment
Target Coordinate Reference System #Data Category 1: Seabed Mapping Benefits Analysis_Regional Segmentation Geospatial Reference Data	DataCat1.001	Coordinate Reference System (CRS)	Geographic Coordinate System - WGS-1984	M-Must have	Geospatial	Engagement is proposed during the prioritisation design stage to identify if multiple CRS or Projections are required for seabed mapping/prioritisation analyses
#Data Category 2: Seabed 2030 Seabed Mapping New AOI [User defined] #This includes geographic coordinate data [Spatial Context] for new seabed mapping user requests / needs to inform Seabed 2030 seabed mapping benefits analysis and prioritisation	DataCat2.002	User Needs AOI (with attributes): New Survey Requests AOIs up to 4.2	User Requests/Needs: Area of Interest for new seabed mapping data acquisition and production. [An extent] [with associated attribution details provided, including: #Area of Interest - options: (i) digitised AOI outline, including origin to existing vector, digitised outline and (ii) uploaded AOI file, and (iii) non-digitised AOI where a user submits a polygonal description, anticipating a follow up call back from Seabed 2030 to support a point definition of AOI / capture of owner. #Why this area is of Interest (support prioritisation evidence case), and that this includes a field to be populated including point of contact (email), name of entity, country (office location), sector, purpose/mission related AOI request. [The purpose / reason fields to be populated can be tailored to reflect high level prioritisation criteria and are TBC at this time]. #Anticipated users: Who are the anticipated users of data products? [Free Text] #Timeframe: Are there any specific time/date / timeframe requirements or constraints associated with the defined AOI. [Yes/No with explanation?] #Budget Availability: Is there any budget available to contribute towards or cover the cost of the acquisition of the identified AOI? [Yes/No with explanation?]	M-Must have	Vector, with attribution [including a combination of geospatial and free text descriptions]	[This data is user generated via tools / data entry form at the seabeds mapping prioritisation tool UI. The data model will include mandatory / optional description fields (mandatory / optional) linked / associated with each AOI, and user submission function. Autoclose will be applied to avoid users losing their data entry.

Data Table Worksheet 4 - #Data Category 3: Seabed 2030 Seabed Mapping Production Data Extents [Production Progress Tracking Data to Inform Seabed Mapping Prioritisation Decision Making]

Seabed 2020 WITS Phase 3 Project						
Seabed 2020 Seabed Mapping Benefits Analysis, Regional Segmentation Data Requirements Table						
#Data Category 3: Seabed 2020 Seabed Mapping Production Data Extents (Production Progress Tracking Data to Inform Seabed Mapping Prioritisation Decision Making)						
Version: v1.0						
Date: 31-Oct-22						
Phase note: Items identified as 'TBD' are to Be Determined, e.g. to take account of ongoing stakeholder engagement guidance and feedback, and/or future next level design decisions to be progressed during FY 2023 (Seabed Mapping Prioritisation Toolkit Design Activities)						
Data Category	Unique ID	Data Title / Name	Data Description	Priority (MoSCoW)	Data Type	Comment
Target Coordinate Reference System #Data Category 1: Seabed Mapping Benefits Analysis Regional Segmentation Geospatial Reference Data	DataCat1.001	Coordinate Reference System (CRS)	Geographic Coordinate System - WGS-1984	M-Must have	Geodetic	Engagement is proposed during the prioritisation design stage to identify if multiple CRS or Projections are required for seabed mapping prioritisation analysis
#Data Category 3: Seabed 2020 Seabed Mapping Production Data Extents (Production Progress Tracking Data to Inform Seabed Mapping Prioritisation Decision Making) This includes geographic area data (Spatial Extent) for new seabed mapping data acquisition planning, commissioning and new seabed mapping data acquisition and production progress tracking	DataCat3.001	Seabed 2020 Data Coverage - Data Catalogue of areas already mapped. Including minimum: #Seabed mapping data area extents (Existing data / data products only) #Seabed mapping data currency (Date of acquisition) #Seabed mapping data product specification (grid product, chart, depth, resolution, etc.) #Seabed mapping available data format (any options or constraints)	It is assumed that a Seabed 2020 data store with an associated data catalogue exists for all acquired and processed Seabed 2020 mapping data and products, and that these are available to support prioritisation. To avoid duplication, ideally the prioritisation tool will be able to make use of a published API or published web data service / metadata driven catalogue from either Global or Regional Seabed 2020 data centres. A data catalogue for prioritisation can be implemented, and this should allow users as a minimum to search, view and understand the following: Seabed mapping data area extents (Existing data / data products only) Seabed mapping data currency (Date of acquisition) Seabed mapping data product specification (grid product, chart, depth, resolution, etc.) Seabed mapping available data format (any options or constraints) Ideally users will be able to download an extract from a full version data catalogue (area extents) file for instances where users wish to define new areas of interest in their own system ahead of updating a new API to any prioritisation tool. (That is support office definition of ACIs). *In the prioritisation decision making process further coverage details are proposed required and not addressed here, please see further below (Element 5 - Present Data Targeted for New Acquisition, commissioned data, and new data acquisition progress (Implementation tracking) - DataCat3.003 - DataCat3.009)	S-Should have	Catalogue, Web service, API	
#Data Category 3: Seabed 2020 Seabed Mapping Production Data Extents (Production Progress Tracking Data to Inform Seabed Mapping Prioritisation Decision Making)	DataCat3.002	Seabed 2020 Regional Center 1: Forward Planning Data for new seabed mapping data acquisition and production (Quarterly and Annual Forward Plan Granularity)	Seabed 2020 Regional Center 1's forward planning new seabed mapping data acquisition and production geographic extents areas, including quarterly and annual planning data. (Southern Ocean Regional Center)	M-Must have	Vector, Web service	This may be a catalogue service (TBD in Prioritisation Tool Development Activity in FY 2023)
#Data Category 3: Seabed 2020 Seabed Mapping Production Data Extents (Production Progress Tracking Data to Inform Seabed Mapping Prioritisation Decision Making)	DataCat3.003	Seabed 2020 Regional Center 2: Forward Planning Data for new seabed mapping data acquisition and production (Quarterly and Annual Forward Plan Granularity)	Seabed 2020 Regional Center 2 forward planning new seabed mapping data acquisition and production geographic extents areas, including quarterly and annual planning data. (Arctic and Indian Oceans Regional Center)	M-Must have	Vector, Web service	This may be a catalogue service (TBD in Prioritisation Tool Development Activity in FY 2023)
#Data Category 3: Seabed 2020 Seabed Mapping Production Data Extents (Production Progress Tracking Data to Inform Seabed Mapping Prioritisation Decision Making)	DataCat3.004	Seabed 2020 Regional Center 3: Forward Planning Data for new seabed mapping data acquisition and production (Quarterly and Annual Forward Plan Granularity)	Seabed 2020 Regional Center 3 forward planning new seabed mapping data acquisition and production geographic extents areas, including quarterly and annual planning data. (Arctic and North Pacific Ocean Regional Center)	M-Must have	Vector, Web service	This may be a catalogue service (TBD in Prioritisation Tool Development Activity in FY 2023)
#Data Category 3: Seabed 2020 Seabed Mapping Production Data Extents (Production Progress Tracking Data to Inform Seabed Mapping Prioritisation Decision Making)	DataCat3.005	Seabed 2020 Regional Center 4: Forward Planning Data for new seabed mapping data acquisition and production (Quarterly and Annual Forward Plan Granularity)	Seabed 2020 Regional Center 4 forward planning new seabed mapping data acquisition and production geographic extents areas, including quarterly and annual planning data. (South and West Pacific Ocean Regional Center)	M-Must have	Vector, Web service	This may be a catalogue service (TBD in Prioritisation Tool Development Activity in FY 2023)
#Data Category 3: Seabed 2020 Seabed Mapping Production Data Extents (Production Progress Tracking Data to Inform Seabed Mapping Prioritisation Decision Making)	DataCat3.006	Seabed 2020 Global Center: Forward Planning Data for new seabed mapping data acquisition and production (Quarterly and Annual Forward Plan Granularity)	Seabed 2020 Global Center forward planning new seabed mapping data acquisition and production geographic extents areas, including quarterly and annual planning data. (Global Center)	M-Must have	Vector, Web service	This may be a catalogue service (TBD in Prioritisation Tool Development Activity in FY 2023)
#Data Category 3: Seabed 2020 Seabed Mapping Production Data Extents (Production Progress Tracking Data to Inform Seabed Mapping Prioritisation Decision Making)	DataCat3.007	New seabed mapping data acquisition planning, pending authority to proceed and commissioning , including: (By region attributed) #1: New data acquisition request is in planning. #2: New data acquisition request proposal submitted and pending authority to proceed. #3: New data acquisition request proposal submitted, authority to proceed issued, and pending commissioning with supplier.	New seabed mapping data acquisition planning, pending authority to proceed and commissioning, including: #1: New data acquisition request is in planning. #2: New data acquisition request proposal submitted and pending authority to proceed. #3: New data acquisition request proposal submitted, authority to proceed issued, and pending commissioning with supplier. Regional Centers will provide data for their respective region areas of responsibility. Global Center will provide data for the global areas of responsibility (Note this should be a collection of the four Seabed 2020 Regional Center's planning data, supplemented with any production work underway by global entities)(TBD in Prioritisation Tool Development Activity in FY 2023)	M-Must have	Vector, Web service	This may be a catalogue service (TBD in Prioritisation Tool Development Activity in FY 2023)
#Data Category 3: Seabed 2020 Seabed Mapping Production Data Extents (Production Progress Tracking Data to Inform Seabed Mapping Prioritisation Decision Making)	DataCat3.008	New seabed mapping data acquisition activated task orders with supplier in production , including: (By data product specification (Based on depth and resolution), including: (By region attributed) #1: progress reporting commissioned, in survey permission phase. #2: in data capture / acquisition phase. #3: data acquired. #4: data in processing/production phase. #5: data produced in post-processing & QC. #6: data produced / available (in production house data store) #7: data uploaded / published to GEMCO / Seabed 2020 data store	New seabed mapping data acquisition activated task orders with supplier in production , including: (By data product specification (Based on depth and resolution), including: (By region attributed) #1: progress reporting commissioned, in survey permission phase. #2: in data capture / acquisition phase. #3: data acquired. #4: data in processing/production phase. #5: data produced in post-processing & QC. #6: data produced / available (in production house data store) #7: data uploaded / published to GEMCO / Seabed 2020 data store Regional Centers will provide data for their respective region areas of responsibility. Global Center will provide data for global areas of responsibility (Note this may be a collection of the four Seabed 2020 Regional Center's planning data supplemented with any production work underway by global entities)(TBD in Prioritisation Tool Development Activity in FY 2023)	M-Must have	Vector, Web service	This may be a catalogue service (TBD in Prioritisation Tool Development Activity in FY 2023)
Footnote: It is assumed that a Seabed 2020 data store with an associated data catalogue exists for all acquired and processed Seabed 2020 mapping data and products, and that these are available to support prioritisation. To avoid duplication, ideally the prioritisation tool will be able to make use of a published API or published web data service / metadata driven catalogue from either Global or Regional Seabed 2020 data centres.						

SECTION FIVE: BENEFITS ANALYSIS WORKSTREAM COLLATION OF FINDINGS/RECOMMENDATIONS

This section provides a table of recommendations identified during the benefits analysis workstream regional segmentation work for carry across into the WITS Phase 3 wider seabed mapping benefits analysis delivery, and for Seabed 2030 ongoing reference / use as applicable.

This work and analysis has identified other findings that sit outside of Task 6.1 focus but provide additional valuable insight and information for use in the wider WITS delivery downstream (benefit analysis and prioritisation) as well as of potential interest for Seabed 2030 management.

Ref.ID	Recommendation
General or additional 'cross-cutting' findings/recommendations	
1.	<p>The International Institutions review has additionally identified a series of programmes underway where International coverage thematic geospatial data has either been collated or is being collated for use across in a range of the Institution 'programme' platforms and/or for programme analytic purposes.</p> <p>It is recommended that the downstream benefit analysis and prioritisation consider these entities as potential sources of thematic data, some of which may be useful as reference data and of use to inform the benefit and prioritisation analysis.</p> <p>Example instances are provided throughout section 3 review findings, and examples are identified further below (as per individual institutions).</p>
2.	<p>The International Institutions review has additionally identified global, regional, and in some instances sub-regional operations office with their location, geographic area of responsibility. Potential points of contact for Seabed 2030 where these details presented themselves during the review have also been collated and included in the institution review details presented in section 3.</p>
3.	<p>Through this task review, a target set of 'global / regional' geospatial reference data with thematic data has been identified that is deemed a baseline set of data to inform seabed mapping benefits analysis and prioritisation analysis. These data details are presented in section 4 while it was deemed an effective use of time to collate at this stage of the work. These data are not exhaustive and further data will be iteratively added as the benefits analysis and future prioritisation workstreams progress.</p> <p>The project is also collating a data table that sits in the background outside of the benefit analysis reporting, in which further technical details on target data sources and in some cases actual copies of data are being collated. Notably, this is where it is deemed beneficial and timely to address at this point in time. This approach is added value for Seabed 2030, and will potentially save time in later project phases (e.g., prioritisation design work planned to be addressed in FY 2023 and future project implementation phases).</p>
4.	<p>The International Institutions review has additionally identified potential opportunities to signpost, refer to our use institutional data and information as grounding evidence for the seabed mapping use case development (WITS Phase</p>

	3 benefit analysis workstream task 6.4 work). These are noted and are proposed considered during task 6.4 delivery.
5.	<p>Geospatial Reference Data Findings/Recommendations: A set of geospatial reference data are proposed collated and used to inform seabed 2030 benefit analysis and prioritisation regionalisation element. These data are presented as three categories:</p> <ul style="list-style-type: none"> • #Data Category 1: [Proposed] Seabed Mapping Benefits Analysis Regional Segmentation Geospatial Reference Data. • #Data Category 2: Seabed 2030 Seabed Mapping New AOI [User defined]. • #Data Category 3: Seabed 2030 Seabed Mapping Production Data Extents [Production Progress Tracking Data to Inform Seabed Mapping Prioritisation Decision Making]. <p>Further data description details are provided in section 4 of this report. <i>Please note these data tables are subject to ongoing iterative updating and ongoing review.</i></p>
Individual Institutions Regionalisation Review Associated findings/recommendations on the regionalisation topic	
6.	<p>The International Union for Conservation of Nature and Natural Resources (IUCN) review findings / recommendations on the regionalisation topic, include:</p> <ul style="list-style-type: none"> • Regional focal / contact points are potentially available to support Seabed 2030 ongoing engagement (IUCN Operational Regional Directors are proposed entry POCs). • It will be potentially helpful to make reference to IUCN Ocean and coasts in the WITS Seabed 2030 benefits analysis workstream work [use case].
7.	<p>The World Bank Group (WBG) review findings / recommendations on the regionalisation topic, include:</p> <ul style="list-style-type: none"> • There may be potential opportunity for the provision of seabed mapping data for use in various WBG toolkit(s). • WBG provides a potential point of access to thematic geospatial data (globally collated data), e.g., WBG collate global vessel traffic data. • Ongoing engagement with WBG regional projects is proposed considered by Seabed 2030 for these programmes to potentially benefit from access to seabed mapping data and/or further build demand for seabed mapping data. • It may be potentially helpful to make reference to World Bank Environment & Natural Resources Global Practice in the WITS Seabed 2030 benefits analysis workstream work [use case and value proposition grounding evidence]. • A proposed access point for Seabed 2030 is via the World Bank Environment & Natural Resources Global Practice.
8.	<p>The Intergovernmental Oceanographic Commission of UNESCO (IOC) review findings / recommendations on the regionalisation topic, include:</p> <ul style="list-style-type: none"> • IOC endorses and promotes Seabed 2030 • IOC potentially provide an opportunity for Seabed 2030 to coordinate regional engagement on oceanographic community e.g., via Vice Chairs and towards the various regional programmes of the IOC. • IOC may potentially provide useful Seabed 2030 benefit analysis use case POCs (e.g., selected across subset of the various IOC regional programmes).

9.	<p>The United Nations Environment Programme (UNEP) review findings / recommendations on the regionalisation topic, include:</p> <ul style="list-style-type: none"> • There is potential to access a range of thematic data sources via UNEP World Environment Situation Room hosting and presenting Data, Information and Knowledge on the Environment, and Copernicus Marine Data Store, as referenced / signposted by UNEP. • Regional focal / contact points are potentially available for Seabed 2030 engagement (and UNEP Regional / Sub-Regional Directors are proposed entry POCs). • UNEP may potentially provide a useful Seabed 2030 benefit analysis use case detail – e.g., selected thematic programme contextual reference and/or grounding evidence.
10.	<p>The United Nations Framework Convention on Climate Change (UNFCCC), including UN Climate Change Conferences (aka COP26/COP27, etc.) review findings / recommendations on the regionalisation topic, include:</p> <ul style="list-style-type: none"> • This entity review is provided to provide an updated position / awareness of the Global UN Convention Framework on Climate Change. • The Regional Collaboration Centre locations (No. 6) may provide a useful ongoing reference for ongoing Seabed 2030 watch on climate change matters / interests.
11.	<p>The United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP) review findings / recommendations on the regionalisation topic, include:</p> <ul style="list-style-type: none"> • UN ESCAP provides a useful regionalization model to inform and potentially align with for Seabed 2030 regional benefit analysis (<i>Asia Pacific Region</i>), given this is the most inclusive intergovernmental platform in the Asia-Pacific region. • Disaster Risk Reduction is a potential use case for inclusion in the Seabed 2030 benefits analysis use case portfolio, and this use case could be researched to focus on the Asia Pacific Region.
12.	<p>UN-GGIM review findings / recommendations on the regionalisation topic, include:</p> <ul style="list-style-type: none"> • Seabed 2030 has endorsed / engaging with UN-GGIM and its component Marine Geospatial Information Programme, the marine component of UN-GGIM. • There is potential for Seabed 2030 to be informed and contribute to UN-GGIM International statistic systems and methods on marine environmental matters. • There is potential for Seabed 2030 to be informed on relevant international standards on an ongoing basis via having a watch on UN-GGIM. • UN-GGIM is well placed to be a focal point for gathering an understanding on the range of global authoritative geospatial data coverage and availability. • UN-GGIM has in place points of contact in each member state, for regional committees, and the Marine Geospatial Information Programme on 'geospatial matters' which may be a useful entrance point in nations Seabed 2030 (where Seabed 2030 does not have existing POCs).
13.	<p>The Organisation for Economic Co-operation and Development (OECD) review findings / recommendations on the regionalisation topic, include:</p>

	<ul style="list-style-type: none"> • OECD is applicable more towards downstream benefit analysis interest, where the project will consider Ocean Economy 'sectors' rather than a focus for regionalisation (OECD being a collection of membership states). • Seabed 2030 could potentially review / consider the various parent bodies and working groups of OECD, and engage any applicable points of contact towards Seabed 2030 awareness building and use of seabed mapping data towards OECD environmental information collation and review. • Seabed 2030 could explore cooperation and potential support from OECD Environment Directorate regards Ocean thematic domain mutual interests. • OECD may provide useful grounding evidence for the Seabed 2030 Value Proposition document (Benefit Analysis workstreams task 6.6).
14.	<p>International Cable Protection Committee (ICPC) review findings / recommendations on the regionalisation topic, include:</p> <ul style="list-style-type: none"> • ICPC is a useful channel for sourcing submarine cable map data (including details on 3 types of cable). • Potential for Seabed 2030 engagement with the ICPC membership to promote, engage with and build ongoing awareness of Seabed 2030. • ICPC is a candidate for WITS benefit analysis workstream to engage with ICPC to develop one of the Seabed 2030, Seabed Mapping use cases (Benefits analysis workstream Task 6.4). <p>Whilst not applicable in terms of ICPC regional operating model, the submarinecablemap.com is useful for Seabed 2030 benefits analysis and prioritisation. The source data is collated and managed by company Telegeography, see here: https://www2.telegeography.com/</p> <p>A GitHub page [see here: https://github.com/telegeography/www.submarinecablemap.com] explains how users can download the data and make your own version of the map. Please note: the data as-is and under the Creative Commons Share alike, non-commercial license. If users wish to license the data for commercial purposes, engagement is required to Telegeography sales team [Email: sales@telegeography.com].</p>
15.	<p>Nippon Foundation Institution review findings / recommendations on the regionalisation topic, include:</p> <ul style="list-style-type: none"> • Useful to be aware of Nippon Foundation programme delivery track record / locations footprint, including Japan, USA, Canada, UK, Sweden, Malta, Germany, and Monaco as ocean / maritime 'delivery locations' in addition to Seabed 2030 regional office footprint. These may provide opportunities to link up in local geographies on Seabed 2030 mission. • Nippon Foundation provides potentially useful background, track record and delivery locations towards informing/supporting any future Seabed 2030 capacity building interests/initiatives.

SECTION SIX: WITS PHASE 3 NEXT STEPS

This report is the WITS Phase 3 benefits analysis workstream deliverable document on regional segmentation, and provides informing details on regional segmentation to support the wider WITS Phase 3 and Seabed 2030 seabed mapping benefits analysis and seabed mapping prioritisation activities.

The projects Phase 2 next steps are to progress with the Phase 3 benefits analysis workstream activities with a next step focus on the definition / production of a:

- (i) Seabed 2030 Value Chain, and
- (ii) Set of Seabed 2030 Economic Impact Sectors.

The project phase 3 benefits analysis workstream will close with the issue of the six deliverable documents that together represent the WITS Phase 3 benefits analysis workstream outputs. Together the documents also include a set of recommendations for Seabed 2030 consideration relating to Seabed 2030 benefits analysis and mapping area prioritisation.

ANNEX 1: GLOSSARY / DEFINITION OF TERMS

[illegible]

ANNEX 2: REFERENCES

Extensive referencing to Entity and data provider websites and content is used in this report with URL references provided throughout.