

**United Nations**  
**Committee of Experts on Global Geospatial Information Management**

**Draft Concept Note to Establish a**  
**Working Group on Marine Geospatial Information**  
**(UN-GGIM: WG-MGI)**

**Rationale**

Human activity on Earth occurs on land, water, and in the atmosphere. Oceans cover about 70% of the Earth's surface and more than three billion people depend on the seas and oceans for their primary source of protein, and according to the UN's International Maritime Organization (IMO), an estimated 90% of the world's trade is carried on seas and oceans. Coordinated geospatial information management in the marine setting will foster better comprehension of marine activities to serve and support the wellbeing of billions of inhabitants reliant on sustainable coastal societies, the marine environment and blue economy; and global development agendas notably the 2030 Agenda for Sustainable Development, particularly the aspirations within Goal 14 and its targets.

As is reflected in the 2030 Agenda, development is not only about knowing "people" but also their "place". Having data that informs on the "who" and the "what" is needed, such as "who" are the nearshore fishermen and "what" is the size of their weekly or monthly catch is certainly useful. It is profoundly better if we are able to know the "where" of their catch and their fishing grounds, a source of their sustenance, livelihood and dignity. The effective use of geospatial technologies, and in this instance, within marine locations can have a transformational impact on many of humanity's most significant challenges, particularly in the small islands and littoral developing world, such as helping global scientists, resource and planning managers and politicians better monitor and protect fragile ecosystems, ensure resilient infrastructure, mitigate climate risks, enhance food security, implement more sustainable practices, reduce poverty, and improve governance, among others. Data is essential for informed policy-making, decisions and actions, data that allows us to know the 'who', the "what" and the "where" is required for the successful implementation of the 2030 Agenda for Sustainable Development. UN-GGIM is advocating that, in developing countries in particular, sustainable geospatial information infrastructure including marine geospatial information and its associated policy frameworks must be anchored to national development initiatives and programs.

The ECOSOC adopted resolution 2016/27 in July 2016 entitled "Strengthening institutional arrangements on geospatial information management". The resolution acknowledges the considerable achievements and progress made by UN-GGIM over the past five years in the field of geospatial information management, and that UN-GGIM is well placed to continue to contribute to the work of the United Nations, especially in the context of assisting Member States to implement the 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction, the Paris Agreement on Climate Change, the SIDS Accelerated Modalities of Action (SAMOA) Pathway, the New Urban Agenda and soon, the outcome of The Ocean Conference of the United Nations<sup>1</sup>.

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<sup>1</sup> *The high-level United Nations Conference to Support the Implementation of Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development will be convened at United Nations Headquarters in New York from 5 to 9 June 2017, coinciding with World Oceans Day, to support the implementation of Sustainable Development Goal 14.*

The United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) as the apex intergovernmental body seeks to play the lead role in setting the agenda for global geospatial information management and to promote its usefulness to address key global challenges and sustainable development. UN-GGIM being the forum to liaise and coordinate among Member States, and between Member States, international organizations and stakeholders should now bring about coordination and coherence in geospatial information management, including for the marine environment, as mandated under ECOSOC Resolution 2016/27.

### **The 2030 Agenda for Sustainable Development**

The availability and accessibility of high-quality, timely and reliable marine geospatial information is a requirement for the management of all Goal 14 targets. This will require an effective data infrastructure that serves as the basis for measuring and monitoring all geospatially dependent initiatives in the Earth's seas and oceans. Without coordinated curation and management of this data, monitoring many of the ocean based initiatives outlined in Goal 14 will be at risk. Furthermore, if the standards for managing marine geospatial data are not compatible with terrestrial based data, it will be more difficult to monitor targets that cross the land-sea interface. For instance, in order to "reduce marine pollution of all kinds, in particular from land based activities, including marine debris and nutrient pollution" data interoperability on both sides of the shoreline is required.

The Working Group will promote geospatial data interoperability – a key requirement for sustainable development in fields such as ocean use planning and administration, construction, water management and hazard assessment.

The work of the UN-GGIM: WG-MGI will contribute to the information management infrastructure required to achieve Sustainable Development Goal 14 and its targets:

- ❑ 14.1  
By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution
- ❑ 14.2  
By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans
- ❑ 14.3  
Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels
- ❑ 14.4  
By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics
- ❑ 14.5  
By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information
- ❑ 14.6  
By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation

❑ 14.7

By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism

❑ 14.a

Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries

❑ 14.b

Provide access for small-scale artisanal fishers to marine resources and markets

❑ 14.c

Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want

The work of the Working Group will also contribute to the information management infrastructure required to achieve Sustainable Development Goal 6 and its targets:

❑ 6.4

By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

❑ 6.5

By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

❑ 6.6

By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

❑ 6.a

By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies

❑ 6.b

Support and strengthen the participation of local communities in improving water and sanitation management

The Working Group will be relying on expert representation from national geospatial information/national mapping agencies and national hydrographic offices of Member States and relevant universally adopted standards established by the International Hydrographic Organization (IHO) for nautical charting, ocean mapping and related hydrographic services, upon which the these agencies deliver their services. The Working Group will take into account progress made in ocean mapping and data availability including that of the IHO-IOC GEBCO project, the IHO Data Centre for Digital Bathymetry and the IHO Working Groups on Marine Spatial Data and Crowdsourced Bathymetry, and seek representation and contributions from these and other relevant parent organizations. The Working Group will also explore engagements with national agencies that have active marine and ocean planning geospatial initiatives underway.

Current progress in the availability of global coverage of marine geospatial data, particularly bathymetry, is less than optimal. As a result, achievement of key elements of the targets under Sustainable Development Goal 14 may be compromised. The following issues therefore may be addressed by the Committee of Experts, acting upon the guidance and advice provided by the Working Group:

- ❑ Marine geospatial data is not adequately addressed in relation to existing and planned terrestrial spatial data infrastructure initiatives;
- ❑ Significant and existing global marine geospatial data is not easily discoverable or made accessible; and
- ❑ Developing countries often do not have sufficient resources required to collect and share marine geospatial data.

The establishment of the Working Group will ensure that marine geospatial information, an integral component of a global geospatial information system, supports the availability and accessibility of comprehensive location-based information in helping Member States to develop strategic priorities, make decisions, and measure and monitor outcomes, recognizing that once these geospatial data are created, they can be used many times to support a multiplicity of applications.<sup>2</sup>

### **Proposed Objective**

The proposed UN-GGIM Working Group on Marine Geospatial Information seeks to –

- (a) Play a leading role at the policy level by raising political awareness and highlighting the importance of reliable, timely and fit-for-purpose marine geospatial information to support the administration, management and governance of the marine and ocean environment;
- (b) Encourage the use of internationally agreed-upon geospatial information frameworks, schemas, systems and established standards to improve the growing inter-dependent relationships between people and the marine environment; and
- (c) Support the Committee of Experts in the development of norms, principles, guides and standards to increase significantly the availability of high-quality, timely and reliable marine geospatial information including any regional capacity development initiatives.<sup>3</sup>

### **Proposed Functions**

The Working Group aims to provide a forum for dialogue and coordination between Member States, United Nations System, International Hydrographic Organisation and other international organisations and experts with a view to –

- i) Encourage enhanced global cooperation in mapping the seas and oceans;
- ii) Explore opportunities for the use and usability of marine geospatial data;
- iii) Encourage maintenance and enhancement of the marine spatial data infrastructure;

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<sup>2</sup> *The Millennium Development Goals Report, 2015 (United Nations)*

<sup>3</sup> *Transforming our world: The 2030 Agenda for Sustainable Development (A/RES/70/1)*  
*Target 17:18; Data, monitoring and accountability- By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts.*

- iv) Encourage the integration of terrestrial (land) and marine geospatial information including considering the issues related thereto;
- v) Encourage the integration of inland tributary hydrographic data with marine geospatial information;
- vi) Improve the availability and accessibility of marine geospatial information including encouraging free and open data access policies and reducing data security concerns;
- vii) Motivate Member States to improve international engagement on marine geospatial information matters;
- viii) Facilitate improved inter-governmental coordination of marine geospatial data activities, standards and infrastructure development; and
- ix) Provide recognition that the contributions by Member States to the marine spatial data infrastructures are valuable and benefits all.

## Summary

The Seventh Session of UN-GGIM will consider the establishment of a Working Group on Marine Geospatial Information (UN-GGIM: WG-MGI).

A key work program of UN-GGIM is to increase significantly the availability of high-quality, timely and reliable geospatial information including for the marine environment in support of national development priorities and the 2030 Agenda for Sustainable Development. Marine geospatial information will be needed to meet the demand for critical analysis when questions of governance, management and coordination pertaining to our seas and oceans and resources arise. These include spaces for recreation, telecommunication, transportation and natural resources yielding food, medicine, energy and minerals. In addition, this information will play a vital role in measuring, monitoring and mitigating climate risk in our seas and oceans. While honouring technologically good practices and currently adopted standards and schemas, UN-GGIM: WG-MGI will work to agree upon appropriate marine spatial data infrastructures and its integration with terrestrial spatial data infrastructures into a national spatial data infrastructure that will also include standards for mapping the seas and oceans and marine observations.

The management of Sustainable Development Goal 14 - *to conserve and sustainably use the oceans, seas and marine resources for sustainable development* and its targets, from ocean acidification to supporting small island States are dependent on internationally agreed data standards and availability of high-quality, timely and reliable marine geospatial information. In addition to Goal 14, the Working Group will also support the geospatial data management aspects of inland waters, covering the resource aspects (improving water quality as expressed in Sustainable Development Goal 6) and water-borne transportation, cadastre, and human impacts.

## **Annex I**

### **Proposed Terms of Reference for the UN-GGIM Working Group on Marine Geospatial Information**

#### **1. Mandate**

- 1.1 The establishment of the UN-GGIM Working Group on Marine Geospatial Information was endorsed by the United Nations Committee of Experts on Global Geospatial Information Management at its Seventh Session in August 2017.

#### **2. Objectives**

The objectives of the Working Group are to:

- 2.1 Play a leading role at the policy level by raising political awareness and highlighting the importance of reliable, timely and fit-for-purpose marine geospatial information to support the administration, management and governance of the marine and ocean environments;
- 2.2 Encourage the use of internationally agreed-upon geospatial information frameworks, schemas, systems and established standards to improve the growing inter-dependent relationships between people and the marine environments; and
- 2.3 Support the Committee of Experts in the development of norms, principles, guides and standards to increase significantly the availability of high-quality, timely and reliable geospatial information including any regional capacity development initiatives.

#### **3. Functions**

The functions of the Working Group will be to:

- 3.1 Provide a forum for dialogue and coordination between Member States, United Nations System, International Hydrographic Organisation and other international organisations and experts with a view to –
- i) Encourage enhanced global cooperation in mapping the seas and oceans;
  - ii) Explore opportunities for the use and usability of marine geospatial data;
  - iii) Encourage maintenance and enhancement of the marine spatial data infrastructure;
  - iv) Encourage the integration of terrestrial (land) and marine geospatial information including considering the issues related thereto;
- v) Encourage the integration of inland tributary hydrographic data with marine geospatial information;
- vi) Improve the availability and accessibility of marine geospatial information including encouraging free and open data access policies and reducing data security concerns;
- vii) Motivate Member States to improve international engagement on marine geospatial information matters;

viii) Facilitate improved inter-governmental coordination of marine geospatial data activities, standards and infrastructure development; and

ix) Provide recognition that the contributions by Member States to the marine spatial data infrastructures are valuable and benefits of all.

3.2 A key undertaking is to contribute towards significantly increasing the availability of high-quality, timely and reliable marine geospatial information to support of national development priorities and the 2030 Agenda for Sustainable Development

3.3 Propose work plans, informed by broad global consultation, to address the main area of focus identified by Member States while ensuring that there are no overlaps or duplication of initiatives.

#### **4. Membership, Composition and Term of Office**

4.1 The Working Group will comprise expert representatives nominated by Member States from their geospatial and statistical communities who are knowledgeable and experienced in the work of the Group. The Working Group will also invite an expert representative nominated by the International Hydrographic Organisation. To ensure broad expertise and effectiveness, subject matter experts from the United Nations System, international organisation and the wider hydrographic surveying communities could be drawn into the Group.

4.2 The Working Group will select two members as co-Chairs and any other position as deemed necessary to support the work of the Group. The co-Chairs will serve for two (2) years and should the work continue beyond two (2) years, the Working Group may retain existing co-Chairs or elect new co-Chairs for another two (2) years. In normal circumstances, co-Chairs should not serve more than two consecutive two (2) year terms.

4.3 Should the need arise; the Working Group may establish sub-groups or task teams to work on particular aspects of its work programme. All sub-groups or task teams must have defined deliverables, delivery milestones and are established with a fixed duration. All sub-groups or task teams must bring its task to a satisfactory conclusion at each session of the Committee of Experts.

4.4 The Working Group will liaise, as required, with international organisations and invite their nominated experts as observers that have an interest in marine geospatial information.

#### **5. Reporting Procedure**

5.1 The Working Group will report to the United Nations Committee of Experts on Global Geospatial Information Management at its annual session and this will include the preparation of written reports and background documents from time to time.

#### **6. Frequency of Meetings**

6.1 The Working Group will operate virtually and meet when the opportunity arises in concurrence with related UN-GGIM events.

#### **7. Governance**

7.1 The UN-GGIM Bureau will review and evaluate the work of the Working Group from time to time, may proposed to UN-GGIM revision of the terms of reference based on the work the

Working Group has completed and any new items that UN-GGIM would like the Working Group to consider.

## **8. Secretariat**

- 8.1 The United Nations Statistics Division, Department of Economic and Social Affairs will serve as the permanent Secretariat of the Working Group. It will provide the day-to-day management and coordination when necessary, and undertake internal and external communication on behalf of the Working Group.
- 8.2 The co-Chairs will coordinate, monitor and report on the activities of any sub-group or task teams to the Secretariat and the UN-GGIM Bureau.
- 8.3 In co-operation with the co-Chairs, the Secretariat will coordinate and assist with the organisation and preparation of the agenda for the meetings of the Working Group, issue notices and any other support activities deemed necessary.

*Ver.2 (Apr 2017)*