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Marine geospatial information

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Note by the Secretariat

Summary

The present paper contains the report of the Secretariat on marine geospatial information for consideration by the Committee of Experts on Global Geospatial Information Management.

At its sixth session, held in New York from 3 to 5 August 2016, the Committee of Experts, in its decision 6/108, recognized the need to consider the marine environment, namely, shorelines, coastal waters, seas and oceans, as a key component of the spatial data infrastructure that underpins the administration and management of land, marine spaces and the national geospatial resources of many littoral Member States. Marine geospatial information will be needed to support the administration, management and governance of the marine and ocean environments to meet the demand for critical analysis when questions arise pertaining to the governance, management and coordination of seas, oceans and resources. Such needs include information on spaces for recreation, telecommunication and transportation and for natural resources yielding food, medicine, energy and minerals. The information gathered will play a vital role in measuring, monitoring and mitigating climate risk in seas and oceans and in supporting national development priorities and the implementation of the 2030 Agenda for Sustainable Development. In its report, the Secretariat provides information on the consideration given by the Bureau of the Committee of Experts to strengthening global geospatial information management, including with respect to addressing substantive issues on the marine environment through the establishment of a new working group, in order to ensure that marine geospatial information 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.

* E/C.20/2017/1

I. Introduction

1. At its second session, convened in August 2012, the Committee of Experts noted[1] the importance of the world's seas, oceans and coastal waters as significant global resources that were neither well mapped nor integrated with land-based geospatial information. The Committee further noted the lack of harmonized land and marine geospatial data and recognized the need for closer working relations between land and marine geospatial data creators in Member States. The Committee, in its deliberations on the provisional agenda for the third session, agreed to include an agenda item to discuss the critical issues relating to the integration of land and marine geospatial information.

2. At its third session, convened in July 2013, the Committee of Experts considered the report of the Secretariat under its agenda on critical issues relating to the integration of land and marine geospatial information. The report, prepared in collaboration with the International Hydrographic Organization and the International Federation of Surveyors, described the importance of hydrographic information as a fundamental requisite to the development of successful economic and environmentally sustainable human activities. The Committee, in its decision 3/109, stressed the importance of improved integration of land and marine geospatial information so that the planning, management and solutions can be identified for Member States in a seamless, interoperable and holistic way, and encouraged relevant national institutions to work together on these issues.

3. The Committee of Experts has considered the availability and accessibility of marine geospatial information for Member States to develop strategic priorities and make decisions. At its sixth session, held in New York from 3 to 5 August 2016, the Committee of Experts, in its decision 6/108, recognized the need to consider the marine environment, namely, shorelines, coastal waters, seas and oceans, as a key component of the spatial data infrastructure that underpins the administration and management of land, marine spaces and the national geospatial resources of many littoral Member States.

4. This present report provides information on the consideration given by the Bureau of the Committee of Experts in strengthening global geospatial information management, including addressing substantive issues on the marine environment through the establishment of a new working group, in order to ensure that marine geospatial information 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. The Committee is invited to take note of this report and to express its views on the establishment of a new working group and the way forward. Points for discussion and decision are provided in paragraph 19.

II. Background

5. Covering approximately 70% of the Earth's surface, it is estimated that more than three billion people depend on the seas and oceans for their primary source of protein. The International Maritime Organization (IMO) has estimated that 90% of the world's trade is carried upon seas and oceans. Therefore, they are critical for littoral states and in particular for small island developing States. Coordinated geospatial information management in the marine environment 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 the blue economy. This is realized within the global development

1 E/C.20/2013/10/Add.1

agendas, notably the 2030 Agenda for Sustainable Development and particularly the aspirations within Goal 14 and its targets.

6. Marine geospatial information is needed to support the administration, management and governance of the marine environment to meet the demand for critical analysis when questions arise pertaining to the governance, management and coordination of seas, oceans and resources. Such needs include information on spaces for recreation, telecommunication and transportation and for natural resources yielding food, medicine, energy and minerals. The information gathered will play a vital role in measuring, monitoring and mitigating climate risk in seas and oceans and in supporting national development priorities and the implementation of the 2030 Agenda for Sustainable Development.

7. The Bureau, at its Expanded Bureau meeting convened in December 2016 in New York, considered a proposal by the United States of America for the Committee of Experts to begin addressing substantive issues related to the marine environment in a more structured way through the establishment of a new working group. This approach would ensure that marine geospatial information 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. The proposal was supported by the International Hydrographic Organization.

8. The Bureau, noting the significance of marine geospatial information, recalled that the United Nations Regional Cartographic Conference for Asia and the Pacific (UNRCC-AP), more than a decade earlier, had addressed "administering marine environment" through its Permanent Committee for GIS Infrastructure for Asia and the Pacific (PCGIAP). PCGIAP convened an International Workshop for Administering the Marine Environment in Kuala Lumpur in 2004 and an outcome of the workshop recommended that the marine dimension be added to the national spatial data infrastructure of all littoral states, as this development would allow for a seamless spatial data infrastructure that promotes the integration of data from the land, coastal zones and marine environment.

9. The Bureau supported the proposal of the United States of America, to move forward and to bring this topic to the attention of the Committee of Experts as a specific agenda item at this seventh session. The proposal to establish a new working group to substantively address marine geospatial information, and to include issues related to inland water bodies and waterways, will have an overarching proviso to focus on the 2030 Agenda for Sustainable Development. In particular, Sustainable Development Goal 14 – Conserve and sustainably use the oceans, seas and marine resources for sustainable development, and where relevant, also consider Goal 6 – Ensure availability and sustainable management of water and sanitation for all.

10. The Bureau acknowledged that the challenge will be to appropriately develop the terms of reference for the proposed working group that will consider both inland water bodies and waterways, and coastal zones, seas and oceans. The United States of America, with the support of the International Hydrographic Organization, has developed the proposed terms of reference for the working group as provided as Annex I to this present report.

III. The 2030 Agenda for Sustainable Development

11. The availability and accessibility of high-quality, timely and reliable geospatial information is vital in order to make informed decisions and to ensure accountability for the implementation of the 2030 Agenda for Sustainable Development. Follow-up and review of progress on the Sustainable Development Goals (SDGs) requires the collection, analysis and dissemination of an unprecedented amount of data and statistics including that for inland water bodies and waterways and coastal zones, seas and oceans. The availability of marine geospatial data, particularly bathymetry, of our seas and oceans is currently less than optimal. The 2030 Agenda presents an unparalleled opportunity to strengthen national geospatial and statistical information systems of Member States that are robust and comprehensive, and that includes both the land and marine environments.

12. Data standards and data interoperability will need to be addressed. If standards for managing marine geospatial data are not compatible with land based data, it will be more difficult to measure and monitor progress across the land-sea interface. As an example, 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 coastline will be required.

13. The data requirements for follow-up and review on the progress of Goal 14 and Goal 6 will require effective spatial data infrastructures that provide the basis for measuring and monitoring all the geospatially dependent initiatives in inland water bodies and waterways, coastal zones, seas and oceans. Without a coordinated and coherent approach, the follow-up and review process will be at risk.

14. The recently concluded *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* stressed the need for an integrated, interdisciplinary and cross-sectoral approach, as well as enhanced cooperation, coordination and policy coherence, at all levels and to dedicate greater resources to the collection and sharing of data and knowledge, including traditional knowledge, in order to increase our knowledge of the ocean, to better understand the relationship between climate and the health and productivity of the ocean, to strengthen the development of coordinated early warning systems on extreme weather events and phenomena, and to promote decision-making based on the best available science, to encourage scientific and technological innovation, as well as to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries.[2]

IV. Working Group on Marine Geospatial Information

15. Marine geospatial information will be an integral component of global geospatial information management, supporting the availability and accessibility of comprehensive location-based information in helping Governments develop strategic priorities, make decisions, and measure and monitor outcomes. The proposed Working Group on Marine Geospatial Information aims to provide a forum for dialogue and coordination between Member States, the United Nations system, the International Hydrographic Organization, and other international organisations and experts with a view to encourage enhanced global

2 Paragraph 8 and 13(f) - Draft call for action, 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, New York, 5-9 June 2017 (A/CONF.230/11)

cooperation to substantively address issues related to the availability and application of marine geospatial information.

16. The Working Group on Marine Geospatial Information would seek 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 inland water bodies and waterways, coastal zones, seas and oceans;

(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.

17. The proposed Terms of Reference for the Working Group on Marine Geospatial Information are provided as an Annex to the present report. The establishment of the Working Group will ensure that that the global geospatial community engages with issues on the acquisition, accessibility and application of geospatial information related to inland water bodies and waterways, inland tributaries and deltas, coastal zones and coastal waters, seas and oceans and to substantively address issues related to seamless spatial data infrastructure that promotes the integration of data from land, coastal zones and marine environment leveraging geospatial information management as a technological and critical enabler for all Member States.

18. At this seventh session, the Secretariat will organise a side event to facilitate discussions on the importance of reliable, timely, and fit-for-purpose marine geospatial information to support the administration, management, and governance of the marine environment as well as applying marine geospatial information in the implementation of the 2030 Agenda for Sustainable Development, particularly Goal 14.

V. Points for discussion

19. The Committee of Experts is invited to:

(a) Take note of the report of the Secretariat on marine geospatial information;

(b) Endorse the establishment of the Working Group on Marine Geospatial Information with Terms of Reference as annexed, and encourage the participation and contribution of Member States to the Working Group, noting the need for appropriate expertise and good geographic representation; and

(c) Express its views on the way forward for the Working Group, and provide guidance on activities requiring further discussion and attention.

ANNEX I

Proposed Terms of Reference for the Working Group on Marine Geospatial Information

1. Mandate

1.1 The establishment of the UN-GGIM Working Group on Marine Geospatial Information will be considered 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 environment;

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 Organization, 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 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 contributions by Member States to the marine spatial data infrastructures are valuable and benefits 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 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 Organization. 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 may 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.

(May 2017)