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Integrated Geospatial Information framework

Integrated Geospatial Information Framework

Note by the Secretariat

Summary

The present paper contains the report of the Secretariat, prepared with assistance from the World Bank Group, on the Integrated Geospatial Information Framework for consideration by the Committee of Experts on Global Geospatial Information Management.

At its eighth session, held in New York from 1 to 3 August 2018, the Committee of Experts adopted decision 8/113, in which it adopted part 1, consisting of the overarching strategic framework of the Integrated Geospatial Information Framework, as a forward-looking document developed to provide overarching strategic messages in the context of an expansive, integrated national framework, focusing on the policy, perspectives and key elements of geospatial information. The Committee agreed in principle with the structure and main elements of part 2, consisting of the implementation guide, as the detailed document that would provide the specific guidance and actions to be taken in implementing the Framework. The Committee also agreed that the detailed implementation guide would need to reference directly and build upon the many current activities, guides and frameworks of the working groups of the Committee, as well as address national and regional spatial data infrastructure and related initiatives and frameworks, in particular in the context of each of the nine strategic pathways of the Framework. In this present report, information is provided on the joint efforts made by the Secretariat and the World Bank to further develop the Framework, its implementation guide and country-level action plans through a process of regional and global consultative and expert group meetings. In that regard, the report provides details on the establishment of a reference group consisting of Member State representatives and experts to draft the implementation guide and to provide guidance on the development of part 3, concerning country-level action plans for the Framework.

* E/C.20/2020/1

I. Introduction

1. Geospatial information is presented in many forms and mediums, and provides the integrative platform for all digital data that has a location dimension to it. All countries and all sectors have a need for geospatial information for national development, policy and decision-making, and to achieve sustainable social and economic development. Collaborative information systems that are comprehensive, coordinated and integrated, underpinned by geospatial information technologies and applications, are providing the evidence on 'where' people interact with their place, cities and environment, and to deliver timely and reliable information necessary for citizens, organizations and governments to build accountable actions and evidenced-based decisions.

2. In August 2017 the United Nations Statistics Division (UNSD) and the World Bank¹ agreed to collaborate on a joint vision to promote growth and prosperity through creating and strengthening geospatial information capacity and development. The objective being to develop an Integrated Geospatial Information Framework that Member States can use to develop and enhance their own geospatial information management. This Framework, implemented at the national level, will assist countries to move towards e-economies, improve services to citizens, build capacity for using geospatial technology, enhance informed government decision-making processes, take practical actions to achieve a digital transformation, and be able to bridge the geospatial digital divide in the implementation of national strategic priorities and the 2030 Agenda for Sustainable Development.

3. In making decision 8/113 at its eighth session in August 2018, the Committee of Experts welcomed the report of the Secretariat², prepared with the assistance of the World Bank, and their joint efforts to develop the Integrated Geospatial Information Framework as an overarching strategic policy guide for countries to reference when developing and strengthening their national and subnational geospatial information management systems and capabilities.

4. The Committee adopted Part 1 of the Framework, consisting of the Overarching Strategic Framework³, as a forward-looking document developed to provide overarching strategic messages in the context of an expansive, integrated national framework, which focuses on the policy perspectives and key elements of geospatial information. The Committee also agreed in principle with the structure and main elements of Part 2, consisting of the Implementation Guide, as the detailed document that will provide the specific guidance and actions to be taken in implementing the Framework. Furthermore, Part 3 consists of Country level Action Plans to implement the Framework at a country level. The Committee commended the efforts of the World Bank with regard to initiating pilots to develop Country-level Action Plans on actual examples and case studies from countries at both the national and subnational levels, and noted requests to further strengthen and pilot the Action Plans in Africa and in the small island developing States, using the unique experiences gained to test different methodologies.

5. The Committee of Experts noted that the Integrated Geospatial Information Framework was intended to serve as an overarching guide for all of activities of the Committee, and in this regard agreed that the detailed Implementation Guide would need to directly reference and build upon the many current activities, guides and frameworks of the working groups of the Committee, as well as address national and regional spatial data

¹ The World Bank's Global Practice on Social, Urban and Rural Development, and Resilience.

² E/C.20/2018/16

³ <http://ggim.un.org/UN-GGIM-Intergrated-geospatial-information-framework/>

infrastructure (SDI) and related initiatives and frameworks, in particular in the context of each of the nine strategic pathways of the Framework.

6. Recognizing the urgency of completing the Implementation Guide and Action Plans in a timely manner, the Committee of Experts supported the suggestion that the completed documents be provided to the Committee for adoption at this ninth session in August 2019.

7. In this present report, information is provided on the joint efforts made by UNSD and the World Bank to develop the Integrated Geospatial Information Framework further, specifically towards Part 2: Implementation Guide and Part 3: Country-level Action Plans, for countries to develop, strengthen and modernise their national geospatial information management systems, infrastructure, capacities and capabilities in order to achieve national strategic priorities and the Sustainable Development Goals (SDGs). The Committee of Experts is invited to take note of the report and to express its views on the way forward on the development of the Framework as a basis and guide for developing, integrating and strengthening geospatial information management, and to assist countries in bridging the geospatial digital divide, secure socio-economic prosperity, and to leave no one behind. Points for discussion and decision are provided in paragraph 47.

II. Evolving the Integrated Geospatial Information Framework

8. The Integrated Geospatial Information Framework aims to translate high-level strategic geospatial information concepts into practical implementation guidance and action for use by Member States and is being developed with the knowledge that it will be a living document, to be further refined as technologies, processes and knowledge evolve. To achieve this, the Framework comprises three (3) separate, but connected documents as referenced in paragraph 4 above. Part 1: Overarching Strategic Framework presents a forward-looking Framework built on national needs and circumstances, and provides the overarching strategic messages, particularly focussing on the policy perspectives and elements of geospatial information. It sets the context of ‘why’ geospatial information management is a critical element of national social, economic and environmental development via vision and mission statements, seven (7) underpinning principles, eight (8) goals and nine (9) strategic pathways that lead to a national approach that takes account of national circumstances, priorities and perspectives as a means for governments to establish more effective geospatial information management arrangements. Intended for a wide range of stakeholders, including high-level policy and decision makers, institutions and organizations within and across government, the Overarching Strategic Framework was adopted by the Committee of Experts at its eighth session in August 2018.

9. Since its adoption, the Overarching Strategic Framework has received wide and unanimous acclaim for its substance and purpose, and was a central reference document at the first United Nations World Geospatial Information Congress convened in Deqing, China in November 2018. Ministers referenced the Framework in their interventions during the Ministerial Segment, as reflected in the Moganshan Declaration issued at the conclusion of the Congress. In addition, the Framework was present throughout the main programme, with a special session⁴ discussing how to operationalise the Framework, with presentations from Chile, Fiji, Sweden, the United Kingdom, the World Bank, and UNSD. This enabled the promotion and awareness-raising of the Framework with Congress participants on its operationalization, and further supports Member States to prepare and implement their own action plans according to their national circumstances.

⁴ <http://ggim.un.org/unwgc/nov20-ss-operationalizing-the-integrated-geospatial-information-framework/>

10. The Framework was also a key component of the Moganshan Declaration⁵, with participants resolving to:

- (a) “Take up the challenge by Ministers and other high-level decision-makers to ensure that geospatial information and location enablement is able to be recognized and underpin the SDGs at national levels through the Integrated Geospatial Information Framework as a fundamental and enabling methodological framework and infrastructure for creating greater social, economic and environmental understanding, evidenced based decision making, design and delivery of projects and services, and implementing and achieving the 2030 Agenda for Sustainable Development;” and,
- (b) “Affirm that geospatial technologies and innovation have been unequally adopted, and that there is an urgent need to effectively bridge the geospatial digital divide to achieve ‘digital transformation’, to democratize and transfer these technologies and associated data through the enabling global mechanism of the 2030 Agenda and Integrated Geospatial Information Framework, noting that innovative technologies such as the cloud, big geospatial data analytics, machine learning, geospatial knowledge services and integrated information systems can ensure such capabilities are easily reachable and useable by developing countries.”

11. Since August 2018, UNSD is aware that Part 1: Overarching Strategic Framework has been translated into Arabic, Mongolian, Slovenian and Spanish. The Secretariat acknowledges the contributions of Chile, Mongolia, Kingdom of Saudi Arabia, Slovenia and the United Nations Economic Commission for Latin America and the Caribbean for their contributions towards efforts to improve awareness and understanding of the Integrated Geospatial Information Framework at the national and/or regional levels. There may be similar translation efforts that UNSD has yet to be informed. These translation efforts and contributions are very much welcomed.

12. Part 2: Implementation Guide is the detail document that provides the ‘what’, the specific guidance, options and actions to be taken by Member States in implementing the Framework. Expanding on each of the 9 strategic pathways, the Implementation Guide captures strategic to operational needs, and comprises references, good practices and specific guiding principles for each of the strategic pathways, including those generated through each of the Subcommittee, Expert and Working Groups of the Committee of Experts. The aim is for the Implementation Guide to provide guidance for governments to establish ‘nationally’ integrated geospatial information frameworks in such a way that transformational change is enabled, visible and sustainable.

13. At its eighth session, the Committee of Experts agreed in principle with the structure and main elements of the Implementation Guide, based on an initial consultation draft presented as a background document for information by the Secretariat. While the Committee raised concerns regarding the length of the proposed Implementation Guide, it noted that the structure and outline were on the right track. Further, the Committee of Experts supported the suggestion that the completed Implementation Guide be provided to the Committee for adoption at this ninth session. Since the eighth session, UNSD, the World Bank, and key actors in the global geospatial information community have dedicated considerable effort and resources to the development of the Implementation Guide which, in itself, is proving to be a very complex and expansive set of documents.

⁵ http://ggim.un.org/unwgic/documents/Moganshan_Declaration_Draft_Final.pdf

14. Due to the considerable commitments and resources required to prepare for and convene the first United Nations World Geospatial Information Congress in Deqing, China in November 2018, the limited resources available in UNSD and the World Bank, and given the requirement for the Guide to be subjected to an inclusive and broad consultation period, in December 2018 UNSD and the World Bank decided it would not be possible to have the Implementation Guide completed and ready for final adoption by the Committee of Experts at this ninth session. However, it was agreed that efforts should be made to have a final draft ready in August 2019 to initiate the broad global consultation with all Member States and relevant stakeholders, and to have the final Implementation Guide launched at, and be a major theme of, the Sixth High Level Forum on UN-GGIM in the United Kingdom in April 2020.

15. The first preliminary pre-drafts of the Implementation Guide chapters were then initiated in early January 2019. UNSD initiated the writing of strategic pathways 1, 2, 4, 5, 7, 8 and 9, while the World Bank initiated writing strategic pathway 3: Financial, and the international standards organizations initiated strategic pathway 6: Standards. At that time it was recognized by UNSD and the World Bank that, to ensure that the content and structure of the Guide is able to truly support the needs and aspirations of Member States, a process of global engagement with key Member States and the global geospatial information community. This engagement included alignment with the current activities, guides and frameworks of the working groups of the Committee of Experts, as well as to address national and regional spatial data infrastructure and related initiatives and frameworks.

16. To achieve these objectives, and within a very condensed time frame, a series of expert consultative meetings have been convened to develop, iterate and refine the Implementation Guide in preparation for the subsequent and broader global consultation with expert representatives from Member States and other key stakeholders. These meetings were made possible as an activity under the 2030 Agenda for Sustainable Development Sub-fund⁶ of the United Nations Trust Fund for Peace and Development.⁷ Four programmed consultations and meetings were scheduled against this activity, were global in scope, and organised with the assistance of the respective regional committees of the Committee of Experts, and have proven to be immensely valuable.

III. Expert Consultative Meetings⁸

First Consultation: World Bank Headquarters, Washington DC, 19-25 March 2019

17. The first expert consultation and meetings on the development of the Implementation Guide was convened at the World Bank in Washington DC from 19 to 25 March 2019, and leading into the annual World Bank Land and Poverty Conference. The objective of these first meetings was to develop the first 'zero-draft' iteration of the Guide. Hosted by the World Bank, this was completed in two segments: from 19 to 21 March 2019, UNSD and the World Bank convened a small team of resource persons to review, revise and re-write as appropriate the initial compiled draft Implementation Guide; and, on 22, 23, and 25 March 2019 a highly participatory and interactive consultative meeting of 33 participants discussed, debated and provided feedback on the 'zero-draft' of the Implementation Guide.

⁶ 2030 Agenda for Sustainable Development Sub-fund Project "Strengthening National Geospatial Information Management Capacities towards Implementing the 2030 Agenda for Sustainable Development."

⁷ Established in 2016 following the pledge by the Government of the People's Republic of China to contribute to the United Nations over a ten-year period with the aim to work together to achieve the goals of the Charter of the United Nations through implementation of innovative, forward-looking and pro-active projects and activities financed by the Trust Fund.

⁸ http://ggim.un.org/meetings/2019/2019-Expert_Consultation_Mtg/

18. The main consultative meeting (attended by 33 participants) included expert representatives from Member States: Canada, Chile, Denmark, Guyana, Mexico, the Netherlands, Norway, Kingdom of Saudi Arabia, Senegal, Sweden, United Kingdom, and the United States of America. Also, key stakeholders from industry and academia, included representatives from: Centre for Spatial Law and Policy, the Open Geospatial Consortium; the thematic groups of UN-GGIM Geospatial Societies, UN-GGIM: Academic Network, and UN-GGIM: Private Sector Network; and from the United Nations System, including UNECLAC, UNECA, FAO, World Bank, and the Secretariat.

19. The outcome of this meeting was a consolidated understanding of both the need for and structure of the Implementation Guide, and resulted in consensus on a number of key agreements going forward. These included:

- (a) The Integrated Geospatial Information Framework is for all (high-level concepts), the 9 strategic pathways provided a sound foundation to be built upon, including each of its 4 elements.
- (b) While intended to benefit low to middle income countries and small island developing States, it became evident in the discussion that the Framework and its Guide can be used to establish and/or strengthen national geospatial information management arrangements as well as to coordinate activities nationally (or sub-nationally) to achieve alignment between already existing national agency capabilities and infrastructures.
- (c) The Implementation Guide provides the ‘what’, the specific guidance and options to be taken by countries in implementing the Framework. It captures strategic to operational needs with guiding principles; while not being detailed and prescriptive – Country-level Action Plans do that.
- (d) Who is the Implementation Guide for, what is the ultimate objective, and what is the level of detail? It is a Guide that is descriptive and not prescriptive. It has to be guidance – there should be flexibility for all countries. The Guide will provide guidance for governments to establish ‘nationally’ integrated geospatial information frameworks in countries in such a way that transformational change is enabled, visible and sustainable. The Guide’s benefits will cascade right down to the citizen.
- (e) Expanding on each of the 9 strategic pathways, the Guide comprises references, good practices and specific principles and actions for each of the pathways, including those generated through each of the Subcommittee, Expert and Working Groups of UN-GGIM.
- (f) The components and relationships need to be understood: Overarching Strategic Framework; Implementation Guide; Appendices; References; Case Studies; Country-level Action Plans; etc. Every country will be different in their response. Every country has a vision and/or strategy. The elements of the Guide will feed into these.
- (g) On the structure of the Implementation Guide, the initial proposed Guide ‘structure, shape and form’ is suitable, but is to be expanded. This includes the first three pages of each chapter defining a high-level summary and an introduction that includes a schematic flow diagram (to articulate the value proposition the pathway offers) and can be used as a tool to inform policy and decision makers.
- (h) An introductory index chapter will tie the Guide together. It will describe and explain the flow and structure of the Guide; bring each of the introductory diagrams together; look at interlinkages across each of the strategic pathways;

address national spatial data infrastructure (NSDI) perspectives; and articulate the ‘level of detail’ of the Guide.

- (i) An informal IGIF Reference Group was also established to assist in the drafting of each of the chapters of the Guide going forward.

20. Additionally, on 25 March 2019, an open consultation and information session was convened as a side event of the 20th Annual World Bank Land and Poverty Conference. The open consultation and information session served to raise awareness of the Framework and the draft Implementation Guide, with the aim to start the process of allowing for consultation, receiving feedback, and raising awareness of the Framework.

Second Consultation: UNECA Conference Centre, Addis Ababa, Ethiopia, 22-25 April 2019

21. The second expert consultation and meeting on the development of the Implementation Guide was convened at the United Nations Economic Commission for Africa (UNECA) Conference Centre in Addis Ababa, Ethiopia from UNECA from 22 to 25 April 2019. This meeting was hosted by the African Centre for Statistics of UNECA and was convened jointly with a Regional Workshop for African countries on the Implementation of National Spatial Data Infrastructure in Africa.

22. The meeting was attended by 33 participants, including representatives from Member States from both the Regional Committees of UN-GGIM Africa and UN-GGIM Arab States, including: Botswana, Burkina Faso, Cameroon, Comoros, Ethiopia, Eswatini, Ghana, Kenya, Madagascar, Namibia, Niger, Nigeria, Kingdom of Saudi Arabia, Senegal, South Sudan, Togo, and Uganda. Also, key stakeholders from industry and academia, included representatives from the Centre of Studies, Research, and Production of Environmental and Sustainable Development Information (CERPINEDD), the Regional Centre for Mapping of Resources for Development (RCMRD), the African Regional Institute for Geospatial Information Science and Technology (AFRIGIST), the World Geospatial Industry Council (WGIC), EIS-Africa, the United Nations Economic Commission for Africa (UNECA), and the Secretariat and resource persons.

23. Given that the Framework is being developed as a reference guide specifically for low to middle income countries and small island developing States, this consultation was valuable in articulating both the needs and challenges for Africa in geospatial information management. The detailed inputs and perspectives from the participants have greatly assisted in developing the Implementation Guide with the appropriate focus. The consultation also provided an opportunity for African countries to understand the value of the Framework and Implementation Guide to assist in overcoming the prevalent lack of ‘political will’ challenges many have identified as constraining the concepts and embracing of NSDIs in Africa. The Integrated Geospatial Information Framework was seen as being critical for changing and elevating the message and perspectives towards growing political knowledge and understanding in geospatial information management. Other key inputs included the following:

- (a) The Framework and its Implementation Guide is a valuable resource. The needs for stronger mandates are important in Africa. What are our challenges? We need to articulate them. What do we do about the lack of policy development? How do we message the strategies and policies? How do we guide implementation?
- (b) The Implementation Guide provides a coordinated and coherent approach to providing geospatial information to countries and users. It will overcome difficulty in bringing all stakeholders and institutions together; lack of

coordination among the related agencies; and lack of awareness of geospatial information by partners, stakeholders and users.

- (c) The Implementation Guide provides the opportunity to ensure availability of data among all stakeholders. It recognizes the need for data sharing as a strength. It describes potential benefits and value for money for the investment. It contributes to reducing the cost of governance and minimizes duplication of effort and management of data.
- (d) A strength of strategic pathway 1: Governance and Institutions is that it provides a means for countries to impose/order arrangements or collaborations between institutions. Changes in government influence institutional stability and could impact/influence continuity of national geospatial development. Recognizes the possible capability of the state to enforce laws.
- (e) A recognition that the Implementation Guide may need to be ‘customized’ to take into account regional geospatial aspects and dimensions of the Framework. For example, considering Agenda 2063 for Africa or INSPIRE for Europe.
- (f) The African region considers the Framework so important that it should be emphasized and presented to the General Assembly for endorsement.

Third Consultation: UN-GGIM Europe Plenary Meeting, Brussels, Belgium, 5-6 June 2019

24. The third expert consultation and meeting on the development of the Implementation Guide was convened in Brussels, Belgium, on 5 June 2019 on the margins of the Sixth Plenary Meeting of UN-GGIM: Europe, and was hosted by UN-GGIM: Europe and EuroStat.

25. The meeting was attended by 37 participants, including representatives from Member States: Armenia, Austria, Belgium, Bosnia and Herzegovina, Denmark, Estonia, France, Germany, Greece, Ireland, Italy, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom. Also, key stakeholders from industry and academia, including representatives from EuroGeographics, the European Commission’s Joint Research Centre, EuroStat, and the UN-GGIM: Private Sector Network; and, from the United Nations System, including: the Economic Commission for Europe (UNECE) and the Secretariat.

26. The expert consultation provided updates on the previous expert consultative meetings and offered further opportunities for the promotion and awareness-raising of the Framework within the European environment. Specific observations from UN-GGIM: Europe included the following:

- (a) It was unanimously agreed that the Framework and the Implementation Guide are very much on the right track and not just for developing countries – but will greatly assist developed countries as well.
- (b) There needs to be more countries involved/engaged in the implementation. It needs to be sustainable. How do we ensure this gets traction and remains a key and enduring effort of the work of the Committee of Experts?
- (c) There is a real need to elevate the conversation on the Framework. Communication and awareness is critical. We are not speaking to the heart enough, only the head. We need to have more passion in the message. Outcomes need to be enabling. How to wrap the value of geospatial information in the argument – the ‘killer’ argument.

- (d) Data is the future. In national e-government and e-economy strategies, it is about data, of which ‘geospatial data’ is an essential part.
- (e) What is the Framework’s relationship with INSPIRE? The Framework is broader and overarching, while INSPIRE is more focused.
- (f) The current process of development and consultation of the Implementation Guide is good, and timing is good. While we need results quickly, we also need to get it right.
- (g) The Framework should be dynamic and be able to be evaluated and revised from time to time. Not become static and out of date.
- (h) Strengthen the ‘impact/outcomes/value proposition’ aspects. Guidance on how we use the Framework and Implementation Guide to maximize its value. Also, simplify some of the language for readability and translation.

Fourth Consultation: Kuala Lumpur, Malaysia, 18-21 June 2019

27. The fourth expert consultation and meeting on the development of the Implementation Guide was convened in Kuala Lumpur, Malaysia, from 18 to 21 June 2019 and was hosted by the Department of Survey and Mapping, Ministry of Water, Lands and Natural Resources, Malaysia and supported by UN-GGIM Asia and the Pacific, whom convened their Executive Board meeting on the margins of the consultation.

28. The meeting was attended by 48 participants including representatives from Member States: Australia, Brunei Darussalam, China, Denmark, Fiji, Guyana, India, Indonesia, Japan, Malaysia, Mongolia, Nepal, Netherlands, Norway, Philippines, Saudi Arabia, Singapore, Sri Lanka, Sweden, Kingdom of Tonga, and the United Kingdom. Also, key stakeholders from industry and academia, included representatives from: the World Geospatial Industry Council and the UN-GGIM: Private Sector Network; and, from the United Nations System, including: the Economic and Social Commission for Asia and the Pacific (UNESCAP), the World Bank, and the Secretariat.

29. The expert consultative meeting included a one-day International Seminar on United Nations Global Geospatial Information Management focusing on the Framework. The Seminar was attended by an additional 400 participants, the majority being national delegates. The Minister of Water, Land and Natural Resources, Malaysia, officially opened the Seminar and also the expert consultation and meeting. In his official opening statement, the Minister noted the following:

- (a) “As the contribution of geospatial information in decision-making increases, maintaining trust and confidence in the information being used will be vital and will continue to form a critical part of the role of the government. I also believe the government must play the role in driving and supporting cross-sector collaboration for reliable and timely data and information for evidence-based responses. Effective collaboration within the surveying disciplines, improving interoperability and integration between geospatial and other disciplines such as statistics and the private sector and scientific and research community. The lack of such collaboration will hamper the timeliness of evidence-based responses.”
- (b) “The Integrated Geospatial Information Framework adopted by the Committee of Experts on Global Geospatial Information Management, a subsidiary body of the Economic and Social Council of the United Nations, is most timely. The Government of Malaysia commends the United Nations Secretariat, the World Bank and the many actors within the Committee of Experts for this important effort and look forward to the practical guidance being developed. This

Framework will similarly provide the basis, reference and mechanism for Malaysia to develop its integrated location-based information management, to deliver our nation building and sustainable development priorities. Malaysia wishes to improve its services to citizens and communities, improve capacity to deploy location-based services, enhance informed policy and decision-making processes, and timely evidence-based responses.”

30. The consultation meeting reviewed the recommended guidance and actions aligned with the 9 strategic pathways of the Framework towards readying the Implementation Guide for this ninth session of the Committee of Experts and the subsequent global consultation. The energetic and robust discussions, extensive and valuable inputs and perspectives from the experts continue to support and assist in developing the Implementation Guide. Of particular note was recognition of the Framework’s ability to elevate the message, perspectives and value proposition for growing political knowledge and understanding in integrated geospatial information management.

31. The meeting agreed that there is a need for success stories to bring the Implementation Guide to life and to be able to communicate its importance. Why it is important to strengthen geospatial information management – and what it can achieve. There is a need to develop a targeted and defined strategy to communicate and sell the value and importance of the Framework to a broad audience more broadly; that resource and financial implications are important variables that need to be considered for all of the strategic pathways; that given the technical nature of the documents, a glossary of terms should be considered; and, that national geospatial information agencies will need to be aware, knowledgeable, and having sufficient resources to implement and sustain a national integrated geospatial information programme.

32. Importantly, the meeting confirmed and supported the final Implementation Guide structure and format that was initially developed by the IGIF Reference Group in March 2019 at the World Bank meetings. Each of the 9 chapters of the strategic pathways will contain the following section structure: Abstract; Summary; Introduction; Context and Rationale; Approach; Elements; Principles; Actions; Deliverables; Outcomes; and Resources. For context, this structure is provided as a series of slides in Annex I to this present report, while several of the draft chapters of the Guide are provided as background documents for information.

33. A notable accomplishment of the meeting was the agreement to progress on the first component document of the Implementation Guide, the ‘opening chapter’. This chapter, titled ‘Solving the Puzzle: Understanding the Implementation Guide’ subsequently has an introduction that elaborates: What is the Framework, the Implementation Guide and what are the relationships with the Overarching Strategic Framework and the Country-level Action Plans? What is the purpose of the Implementation Guide, what is it to be used for and how we got here. This chapter will contain nine sections, namely: Executive Summary; Introduction; Describing the Guide; Examples of How the Guide will be Used and Managed; Describing the Strategic Pathways; How to Use the Guide; Country-level Action Plans; Benefits and Interlinkages.

IV. Country-level Action Plans

34. Part 3: Country-level Action Plans, seek to implement the Framework at a country level, in a national or a sub-national context, taking into consideration national circumstances and development priorities. The Country-level Action Plans provide the ‘how, when and who’ processes in implementing the Framework, detail actions and activities that need to be taken in the short, medium and longer-term, and prioritise these actions and activities including resourcing (capacity, capabilities, technologies and budgetary) considerations

towards establishing, strengthening or coordinating nationally integrated geospatial information management. Importantly, each country will own, design, implement, manage and sustain their own Integrated Geospatial Information Management Strategy through its own Country-level Action Plan.

35. A Country-level Action Plan references the specific guidance, options and actions provided in Part 2: Implementation Guide and addresses each of the 9 strategic pathways to capture strategic to operational needs of a country when implementing the Framework. The Action Plan is expected to comprise a series of components, including but not limited to: vision, mission and goal(s); leadership and lead entity(s); partners and related stakeholders; strategic drivers and rationale; governance mechanism including laws, regulations and policies; value proposition and socio-economic-environmental benefits; prioritized and sequenced implementation activities, timeframes and milestones; costing, budgets, allocations and funding sources (including extra-governmental funding); critical success factors; risk assessment and mitigation plan; monitoring, evaluation and re-assessment. These components are by no means definitive or exhaustive, as a Country-level Action Plan is intended to be developed by a country in accordance with their individual national circumstances and priorities.

36. The Country-level Action Plans are now being developed in parallel and coordination with the Implementation Guide. They are being implemented in several ways. The World Bank and the Food and Agriculture Organization of the United Nations (FAO) have jointly developed a set of assessments and diagnostic tools (IGIF Toolkit) to implement the Framework at the country-level. The IGIF Toolkit includes: i) a rapid diagnostic which provides a baseline assessment of the current situation following the IGIF strategic pathways; ii) an impact assessment including geospatial alignment to policy and business drivers; iii) a socio-economic benefits analysis; and iv) the Action and Investment Plan. Through its projects the World Bank has supported development of Action and Investment Plans in Albania, the State of Palestine and the municipality of Tirana, Albania at the sub-national level. Work is currently underway in Vietnam, Colombia and the Seychelles. In addition, FAO has supported preparation of the Cooperative Republic of Guyana Action Plan through the Sustainable Land Development and Management Project.

37. The templates for the IGIF Toolkit will be updated to fully align with the forthcoming Implementation Guide and made available to interested Member States and development partners. In addition, the World Bank is preparing an e-Learning course on geospatial information management and the Integrated Geospatial Information Framework, which will be available on the World Bank Group's Open Learning Campus platform.

38. UNSD, in parallel with the development of the Implementation Guide, through its Development Account 11th Tranche Project⁹ designed and developed an approach towards preparing and developing a Country-level Action Plan. The approach and related tasks are designed to consider national circumstances by recognizing that one size does not fit all. UNSD's approach has three components, namely: i) Developing an Execution Plan; ii) Assessment and Analysis; and iii) Developing a Country-level Action Plan. This approach was developed out of the need to consider existing, and then developing new, capacity and capabilities as a critical feature when implementing the Framework. The recommended tasks within each of the three components will be adaptable and designed to draw out and work to support identified national development priorities.

⁹ "Strengthening geospatial information management in developing countries towards implementing the 2030 Agenda for Sustainable Development."

39. The approach developed is intended to be inclusive and participatory, and one where existing institutional capacity and capabilities are recognized, and where capacity and capability development commences with the very first task, gradually maturing as each successive task is undertaken. Along with this approach, a series of resource materials and tools are being developed by UNSD under its United Nations Trust Fund for Peace and Development Project¹⁰ to support the development of the Country-level Action Plans. Presently, these include:

- (a) Component 1 – Developing an Execution Plan
 - (i) Project Initiation and Pre-needs Assessment
 - (ii) Project Execution Plan
- (b) Component 2 – Assessment and Analysis
 - (iii) Current and Desired (or Future) Situation Assessment
 - (iv) Baseline Survey
 - (v) Environmental Scanning and Analysis
 - (vi) Stakeholder Identification and Analysis
 - (vii) Stakeholder Engagement Workshop
 - (viii) Strategic Alignment (and Benefits)
 - (ix) Vision, Mission and Goals
 - (x) Gap Analysis Matrix
 - (xi) Needs Assessment and Gap Analysis Report
- (c) Component 3 – Developing a country-level Action Plan
 - (xii) Country-level Action Plan (Template)
 - (xiii) Strategic Pathway Actions and Sub Tasks
 - (xiv) Implementation Schedule
 - (xv) Budget Estimations
 - (xvi) Success Indicators

40. UNSD considers this approach as practical and innovative because it acknowledges existing capacities and capabilities within countries and delivers development and improvement incrementally by methodologically working through the recommended tasks. In the process, it strengthens existing capacities and capabilities, favors sustainable improvement, and institutionalizes these capacities and improvements. This Action Plan approach, with its recommended tasks, is being piloted at the country level with six participating countries¹¹ under the Development Account 11th Tranche Project, which focuses on improving and strengthening national geospatial information management capacities towards implementing the 2030 Agenda and evidence-based policy and decision-making through country implementation of the Framework.

¹⁰ “Strengthening National Geospatial Information Management Capacities towards Implementing the 2030 Agenda for Sustainable Development” under the 2030 Agenda for Sustainable Development Sub-fund Project

¹¹ Burkina Faso, Ethiopia, Fiji, Mongolia, Nepal and Tonga

V. The Roadmap to Implementation

41. Initiated in March 2019 at the World Bank in Washington DC, a series of four global expert consultative meetings have now been convened. These expert consultations were intended to initiate a process of global engagement and alignment with the current activities, guides and frameworks of the working groups of the Committee of Experts, as well as address national and regional SDI and related initiatives and frameworks. The objective of these meetings was to iterate, refine, and develop the Implementation Guide of the Framework, in the drafting phase, in preparation for a subsequent and broader global consultation with expert representatives from Member States and other key stakeholders within the global geospatial information management community.

42. During the process of the four consultative meetings, Member States and invited experts raised questions regarding the refinement of Part 1: Overarching Strategic Framework. Ensuing discussions explored potential opportunities to improve its applicability and relevance with advancements within the global geospatial community, and to more strongly align with the new work and activities of the Committee of Experts. These opportunities are to be further discussed and elaborated in detail as the Framework evolves and is adopted. The ensuing lessons learned, and good practices can then be subsequently used to support the refinement of the Framework and further enable its implementation.

43. Importantly, the consultative meetings provided an opportunity for a total of 58 Member States and many key stakeholders within the global geospatial information community (more than 150 participants) to constructively contribute to the development of the Implementation Guide, while offering an opportunity to promote the Framework amongst national delegates, policy and decision makers, and the broader geospatial information community. The ensuing energetic and robust discussions, extensive and valuable inputs and perspectives from the experts continue to support and assist in developing the Implementation Guide. Of particular note was recognition of the Framework's ability to elevate the message, perspectives, value proposition for growing political knowledge and understanding in integrated geospatial information management.

44. The consultations provided rich context, perspectives, contributions, requests and guidance that have greatly enhanced and, necessarily, extended the development of the Implementation Guide. The levels of engagement and the personal commitment by many of the Committee's global leaders has been exemplary and beyond expectations. This early engagement and consultation with Member States and experts has resulted in a much more robust dialogue, and subsequent understanding, in the development of a very complex and inclusive Guide. This has meant a high level of information sharing, ownership and direction for what the final composition of the Guide look like. In hindsight, having initiated and convened these comprehensive engagements now rather than later will make the global consultation much easier, engaging and understandable for Member States.

45. However, this level of engagement, volume of information, and the expectations and requirements that go along with it, has also meant that it is not possible to complete the entire 10 chapters of the Implementation Guide for this ninth session of the Committee of Experts in readiness for the global consultation. Therefore, following the Kuala Lumpur meetings, UNSD and the World Bank, in consultation with the IGIF Reference Group, have 'recalibrated' and prepared a modified roadmap for the completion of the Implementation Guide. It is intended to now launch the global consultation of the Guide towards the end of September 2019. The consultation will be open for three months and conclude on 31 December 2019 to allow sufficient time to incorporate appropriate changes and finalize the Guide. It should be noted that this delay will not affect the completion and launch of the Implementation Guide in April 2020 at the Sixth High Level Forum on UN-GGIM in the

United Kingdom, as some flexibility for this contingency had been allowed for. It is anticipated that the Implementation Guide will then be formally adopted at the tenth session of the Committee of Experts in August 2020.

46. One advantage of this slight delay is that the Country-level Action Plan templates, assessments and tools, as described in Section IV above, can be sufficiently developed, tested and refined with pilot countries by UNSD and the World Bank, so that they can also be presented to the Committee at its tenth session for consideration and adoption.

VI. Points for discussion

47. **The Committee of Experts is invited to:**

(a) Take note of the present report and express its views on the activities and progress of the Integrated Geospatial Information Framework and its Part 2: Implementation Guide;

(b) Express its views on the process of the expert consultative meetings and the subsequent preparations of the Implementation Guide and the ensuing global consultation;

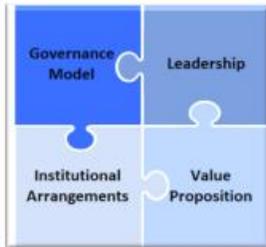
(c) Express its views and provide guidance on the way forward for Part 3: Country-level Action Plans, with expert support from UNSD, the World Bank and a number of pilot countries; and

(d) Provide any further guidance regarding the way forward on new developments regarding strengthening national geospatial information management, and to assist countries to bridge the geospatial digital divide.

ANNEX I

Integrated Geospatial Information Framework Implementation Guide Structure

National Implementation Guide
Implementation Guide
What?
Part 2



UN-GGIM

United Nations Secretariat
Global Geospatial Information Management

The 'final' Guide Structure as aligned to what we agreed in March

Proposed Document Structure

- **Abstract**
- **Summary**
- **1.1 Introduction**
- **1.2 Context and Rationale**
- **1.3 Approach**
- **1.4 Elements**
- **1.5 Principles**
- **1.6 Actions**
- **1.7 Deliverables**
- **1.8 Outcomes**
- **1.9 Resources**



Strategic Pathway 1

Governance and Institutions

This strategic pathway establishes the leadership, governance model, institutional arrangements and a clear value proposition to strengthen multi-disciplinary and multi-sectoral participation in, and a commitment to, achieving an Integrated Geospatial Information Framework.

The objective is to attain political endorsement, strengthen institutional mandates and build a cooperative data sharing environment through a shared vision and understanding of the value of an Integrated Geospatial Information Framework, and the roles and responsibilities to achieve the vision.

Summary

Geospatial information is increasingly being harnessed to interconnect and integrate government functions and commercial services - making cities more livable, citizens more engaged and informed, and agricultural areas more productive. Traffic congestion, weather reports, air pollution, bus locations, pest monitoring, flood sensors, and electricity outage applications are all underpinned by geospatial information that can be purchased into a seamless knowledge environment so that information can be accessed quickly by users to make informed decisions. For government this means streamlining operations, reducing costs and improving overall economic and social sustainability.

This level of geospatial capability can only be achieved through cooperative governance frameworks and with strong leadership that penetrates across sectors and through all levels of government. Institutions need to work together to share information and work towards common strategic priorities and goals.

By interconnecting government functions through well-functioning governance frameworks, it is possible to bring together geospatial information from multiple sources so that it can be used seamlessly on a computer, tablet and smartphone. Good governance and cooperative institutional arrangements are the first priority in the geospatial information reform agenda. They enable geospatial information challenges to be met head on, provide flexibility to accommodate the rapidly changing environment, and the ability to embrace community and business participation within a culture of digital reform.

Common to all governance and institutional arrangements are four key elements that are required to build a cooperative data sharing environment and an appreciation of the value of geospatial information for decision-making.

Strategic Pathway 1: Governance and Institutions

Page 1.1

Positioning geospatial information to address global challenges

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The first 3 pages of the Chapter define the high-level 'Summary', and can be used as a stand-alone flyer if required.

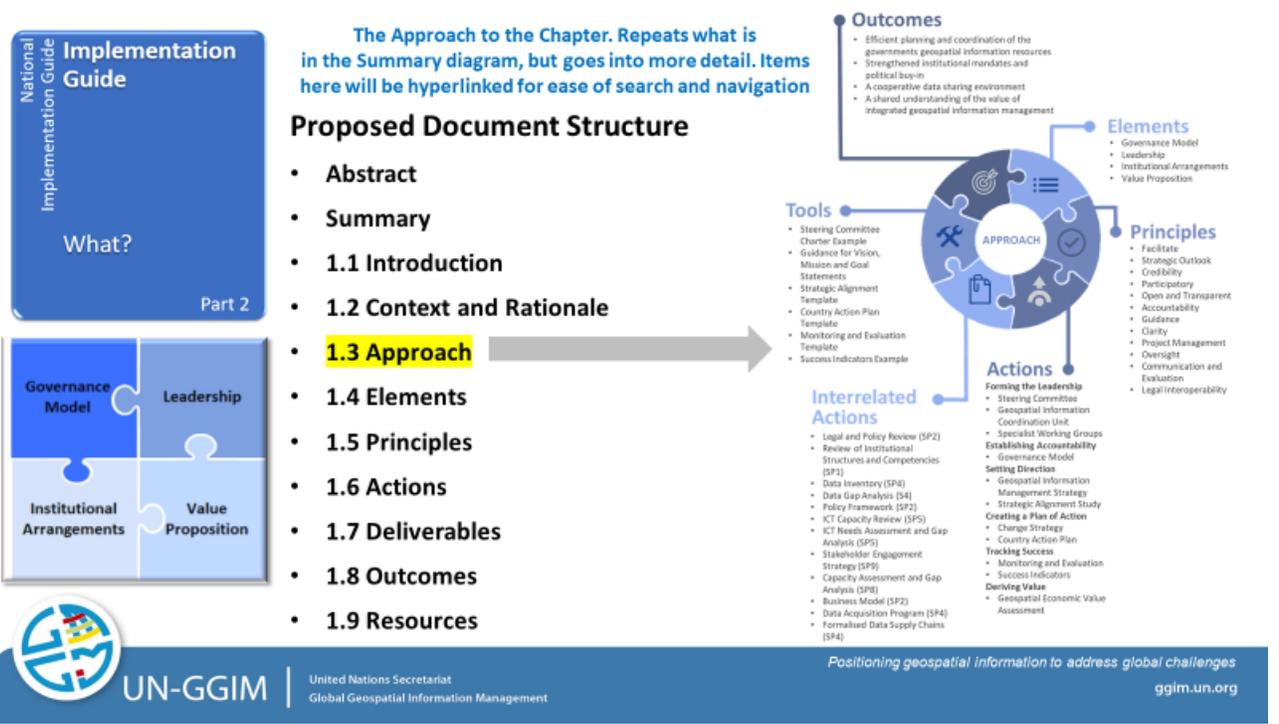
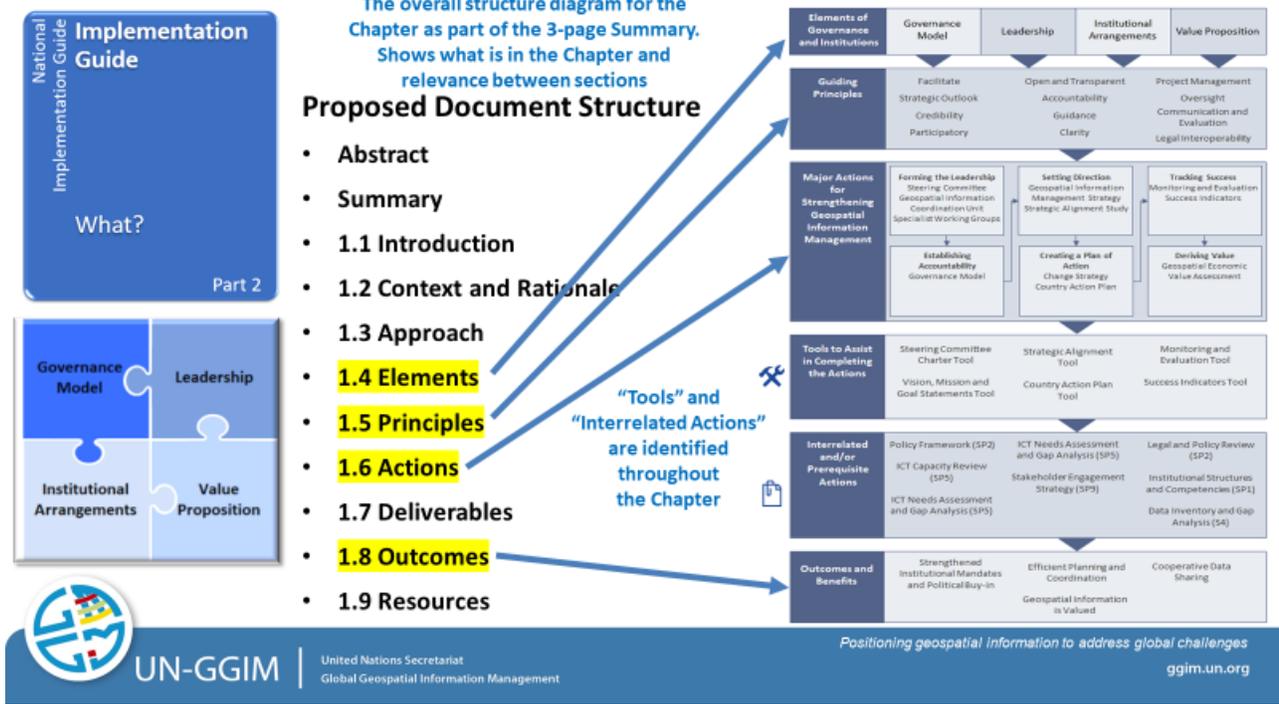


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National Implementation Guide
Implementation Guide
 What?
 Part 2

Governance Model | **Leadership**
Institutional Arrangements | **Value Proposition**

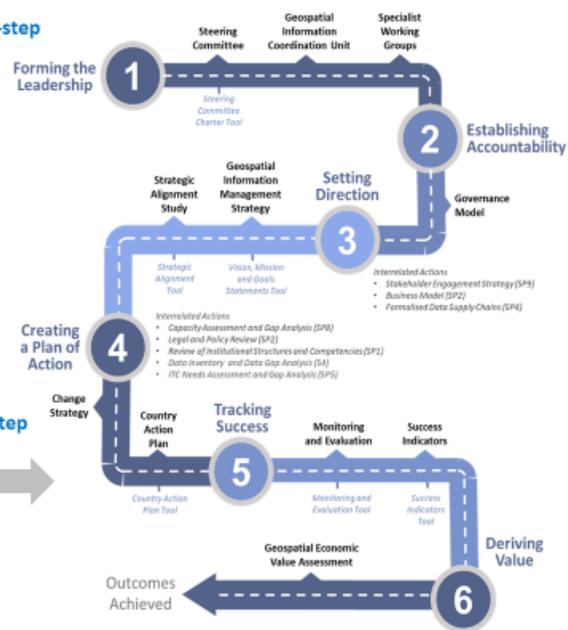
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The Actions as a sequential 'step-by-step road map that links the actions and recommended steps

Proposed Document Structure

- Abstract
- Summary
- 1.1 Introduction
- 1.2 Context and Rationale
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- 1.5 Principles
- **1.6 Actions**
- 1.7 Deliverables
- 1.8 Outcomes
- 1.9 Resources

The "Actions" as a sequential step-by-step road map



National Implementation Guide
Implementation Guide
 What?
 Part 2

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Actions repeated here as a different schematic, but with more detail regarding the "Tools" and 'Interrelated Actions'. Will be hyperlinked for ease of search and navigation

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