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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 High-level Group of the Integrated Geospatial Information Framework, prepared with the assistance of the Secretariat, on the Integrated Geospatial Information Framework for consideration by the Committee of Experts on Global Geospatial Information Management.

At its tenth session, held virtually on 26 and 27 August and 4 September 2020, the Committee of Experts adopted decision 10/103, in which it welcomed the efforts to further develop and refine the Implementation Guide of the Integrated Geospatial Information Framework as a means of strengthening national geospatial information management arrangements within and across Member States. The Committee adopted the Implementation Guide of the Framework, subject to further refinement and finalization, as a means of strengthening national geospatial information management arrangements within and across Member States at the institutional level and supporting the implementation of the Sustainable Development Goals, especially in developing countries. The Committee noted the global significance of the Framework, which served as a key umbrella for the many activities under the purview of the Committee of Experts, its regional committees and thematic groups, and which could be applied to any country to guide transformative change. The Committee recognized that both developed and developing countries were currently implementing the Framework and developing country-level action plans on an optional and voluntary basis, in accordance with the available guidance and tools.

Also at its tenth session, the Committee of Experts endorsed the establishment of a dedicated high-level group of experts, with balanced geographical representation and expertise, as a mechanism to provide strategic leadership, coordination and oversight in order to ensure the sustained success of the Framework, and to mobilize the resources necessary to maintain the momentum and refinement of the Framework as a continuously evolving process.

In this present report, information is provided on the efforts and progress made to refine and finalize the Implementation Guide, which is intended to be a living and usable document. This includes the provision of assistance, including resource and e-learning materials, for the development of country-level action plans to strengthen national capacities to effectively manage geospatial resources, and to modernize national geospatial information arrangements in Member States,

* E/C.20/2021/1

particularly in developing countries. The report further serves to inform the Committee of Experts of the efforts to formally establish the High-level Group of the Integrated Geospatial Information Framework, ensure that its membership comprises balanced geographical representation and expertise and develop and finalize its terms of reference.

This present report includes information on the progress and activities of the High-level Group, including its working methods and the meetings it has held virtually. At its first working meeting, the High-level Group reviewed the draft terms of reference and confirmed its mandate, objectives, role, membership composition and methods of work, and unanimously adopted its terms of reference. The High-level Group decided that it may review its terms of reference as the need arises, but only in consultation with the Committee of Experts, to ensure that it functions efficiently and effectively based on its mandate. The membership of the High-level Group comprises a maximum of 22 Member States, made up of members of the Bureau of the Committee of Experts and representatives of Member States, at the highest executive leadership level, from national geospatial information (or related) agencies nominated by the bureaux of each of the five regional committees of United Nations Global Geospatial Information Management. The nominations from the regional committees were regionally representative and, where appropriate, balanced between developed and developing countries with due consideration given to countries in special situations.

The present report also includes information on efforts by the High-level Group to develop its strategic plan, inclusive of goals and objectives, and its high-level plan of action to provide the strategic leadership, coordination and oversight needed to sustain the usability and success of the Framework, mobilize the resources necessary to maintain the momentum and refinement of the Framework and advocate and raise awareness, including in the context of funding entities, as a means of strengthening national geospatial information management arrangements.

I. Introduction

1. At its eighth session in August 2018, the Committee of Experts, in making decision 8/113, welcomed the formulation of the Integrated Geospatial Information Framework (IGIF) as an important and practical overarching strategic policy and guide for countries to reference when developing and strengthening their national and sub-national geospatial information management systems and capabilities. The Committee of Experts supported the approach that the IGIF should serve as a living document, to be further refined as technologies, processes and knowledge evolved, and should comprise three parts as separate, but connected, documents.

2. In making decision 8/113, the Committee of Experts adopted Part 1 of the IGIF, consisting of the Overarching Strategic Framework¹, 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, and in this regard supported the preparation of an illustrative summary as a high-level reference document aimed at enhancing geospatial awareness for policymakers and decision makers.

3. At its tenth session, held virtually on 26 and 27 August and 4 September 2020, the Committee of Experts, in making decision 10/103, adopted Part 2 of the IGIF, consisting of the Implementation Guide², subject to further refinement and finalization, as a means of strengthening national geospatial information management arrangements within and across Member States at the institutional level and supporting the implementation of the Sustainable Development Goals, especially in developing countries.

4. In making decision 10/103, the Committee of Experts noted the global significance of the IGIF, which serves as a key umbrella for the many activities under the purview of the Committee of Experts, including the regional committees and thematic groups of UN-GGIM, which could be applied to any country to guide transformational change, and which would be a living and usable document to be reviewed and refined through an iterative process, on the basis of the practical implementation experiences of Member States.

5. In this regard, the Committee of Experts endorsed the establishment of a dedicated high-level group of experts, with balanced geographical representation and expertise, as a mechanism to provide strategic leadership, coordination and oversight in order to ensure the sustained success of the IGIF, and to mobilize the resources necessary to maintain the momentum and refinement of the IGIF as a continuously evolving process.

6. At its tenth session, the Committee of Experts further encouraged consideration of a programme, in coordination with the regional committees and the regional commissions of the United Nations system, which would leverage the IGIF and its Implementation Guide with a view to strengthening national capacities to effectively manage geospatial resources in order to modernize national geospatial information arrangements in Member States, in particular in developing countries, and to advocate and raise awareness, as appropriate, including in the context of funding entities.

7. In this present report, information is provided on the formal establishment, progress, and activities of the High-level Group of the Integrated Geospatial Information Framework

¹ <http://ggim.un.org/meetings/GGIM-committee/8th-Session/documents/Part%201-IGIF-Overarching-Strategic-Framework-24July2018.pdf>

² <https://ggim.un.org/IGIF/part2.cshtml>

(HLG-IGIF), including its working methods and the meetings it has held virtually. The report further serves to inform the Committee of Experts of the efforts and progress made to refine and finalize the Implementation Guide, which is intended to be a living and usable document. This includes the provision of assistance, including resource and e learning materials, for the development of country-level action plans to strengthen national capacities to effectively manage geospatial resources, and to modernize national geospatial information arrangements in Member States, particularly in developing countries.

8. The Committee of Experts is invited to take note of the report and to express its views on the activities of the HLG-IGIF and way forward on the further refinement and development of the IGIF. Points for discussion and decision are provided in paragraph 57.

II. Refining the IGIF Implementation Guide

9. At its tenth session and following a broad global consultation which was launched in early March 2020 and concluded in July 2020, the IGIF Implementation Guide was adopted by the Committee of Experts, subject to its further refinement and finalization. The consultation clearly demonstrated countries agreed that the main content of the Implementation Guide was well written and encompasses relevant information. However, the consultation also revealed areas for improvement that had not been addressed during the initial processes to incorporate feedback.

10. The Secretariat continues to refine and finalize the Implementation Guide, the formulation of which has been well informed and influenced by the broad global consultation process. The consultation followed 15 IGIF events that included expert meetings, workshops, and seminars with more than 730 participants from 133 countries from October 2018 to February 2020 and realized 68 responses yielding 1350 separate items to review and consider. The wealth of expert contributions and inputs across all ten chapters of the Implementation Guide³, including detailed comments and feedback, together with some country-level experiences leveraging the IGIF, have considerably sharpened and strengthened the implementation guidance and recommended actions. However, going forward, these refinement, finalization and digital publication efforts will need to be guided by the recently established HLG-IGIF.

11. In the refinement process, each of the 1350 items contributed have been considered and addressed as appropriate. Particular attention has been paid to where gaps existed in the guidance and actions, including improving the flow and readability by reformatting the layout. This has resulted in some minor changes to the strategic pathway key elements and objectives which will need to be reflected and updated in the Overarching Strategic Framework. It should be noted that the majority of comments addressed the information presented in the Implementation Guide, while a small subset of comments was deemed more strategic and appropriate for consideration by the HLG-IGIF in response to potential future needs.

12. Many countries, both developed and developing, are now implementing the IGIF and developing their own Country-level Action Plan (CAP), based on the guidance and resources that are presently available. The Implementation Guide has benefitted from, and been informed and enhanced by, the experience and national circumstances of these implementing countries. Mindful of this, the length of the Guide, and that there is only so much information that can be provided, there is consideration for a series of training modules and

³ As noted in the report to the tenth session of the Committee of Experts: https://ggim.un.org/meetings/GGIM-committee/10th-Session/documents/E-C.20-2020-25-Add_1-Integrated-Geospatial-Information-Framework-7Aug2020.pdf

communication mechanisms to be developed to assist Member States wanting to implement the various actions recommended in the Implementation Guide.

13. As a living document, that is ‘country owned and country led’, there is still more that needs to be done to refine and improve the Implementation Guide as an evolving process. An immediate priority for the HLG-IGIF is the refinement, finalization, and digital publication of the IGIF Implementation Guide, and update of the IGIF Overarching Strategic Framework. At the same time, a focused communication strategy is being developed to strengthen coordination and support the implementation of the IGIF. This will be integrated with the dedicated IGIF website. However, this represents an enormous task, which is presently considerably under-resourced.

III. Implementing the IGIF at the Country-level

14. A CAP references the specific guidance options provided in the IGIF Implementation Guide and considers the recommended actions according to respective national circumstances and priorities. The CAP addresses each of the strategic pathways and prioritizes activities and actions while considering the strategic and operational needs, circumstances, and capacities of a country. It is a ‘requirements document’ that serves as a ‘roadmap’ for implementing what is needed for improving or strengthening national geospatial information management arrangements.

15. The United Nations Development Account 11th tranche Project 1819D focusses on improving and strengthening nationally integrated geospatial information management arrangements and capacities in six countries⁴. The principal thrust of this Project is to leverage the IGIF as a reference mechanism to strengthen geospatial information management arrangements nationally. In the fourth and final year of the Project, the six countries have utilized a ‘self-paced, learn and discover’ capacity development approach that considers existing arrangements, and then develop new capacities and capabilities as a critical feature required for implementing the IGIF. All six countries have developed, or are developing, their draft CAP, having methodologically analyzed and assessed their national needs and gaps based on national circumstances applying the nine strategic pathways. This Project and partnership with countries has tested the concepts provided in the Guide and has yielded a wealth of experience and understanding and continues to further sharpen and focus the implementation guidance and recommended actions of the IGIF Implementation Guide. This process has proven that there is more to learn and the living nature of the Guide.

16. This United Nations capacity development approach necessitated the development and piloting of a series of guides and resource materials with the six partnering countries for their design and development of their individual CAPs. These guides and resource materials allowed countries to work through a series of tasks and assessments methodically, and included engagements with strategic stakeholders, affording better understanding of national circumstances, gaps and needs, and ensuring alignment with national development priorities. Through this approach, countries can identify their required priorities in determining their plans and actions to strengthen geospatial information management nationally. These guides and resource materials, including a policy and legal resource kit and a communications resource kit, will be collated, refined, and made available to support the preparation and development of CAPs by other countries.

17. It should be noted that, in the development of the CAPs by countries, there are considerable benefits being realized from the multiple threads of work and activities

⁴ Burkina Faso, Ethiopia, Fiji, Mongolia, Nepal, and Kingdom of Tonga

emanating from the Subcommittee, Expert and Working Groups of UN-GGIM. Where applicable, countries are referencing and using outputs from these key groups to validate their plans and serve as suggested actions where appropriate. While the thematic groups are less precise, they provide a source for training and guide development, resources and instructional assistance.

18. During the intersessional period, the regional committees of UN-GGIM were encouraged to consider a sub-regional collective modality concept that would allow a group of candidate countries to work with the United Nations ‘self-paced, learn and discover’ approach, to prepare and develop their CAPs according to their national circumstances. As such, countries will adapt, tailor and utilize the guides and resource materials as appropriate for their assessment, design and development of their CAPs and implement the IGIF at their country-level. The sub-regional collective modality recognizes existing sub-regional and linguistic realities, and leverages existing knowledge, experiences and resources that may be available, including from within the regional committees of UN-GGIM and the United Nations regional economic commissions. As noted in a separate report for this eleventh session of the Committee of Experts, this sub-regional concept is being considered by UN-GGIM: Africa, together with the Economic Commission for Africa, with the support of the World Geospatial Industry Council.

IV. Establishment of the HLG-IGIF

19. There is now broad global consensus, support, and agreement on the critical importance of the IGIF and its Implementation Guide. The IGIF is tangible evidence of the progress made since the establishment of the Committee of Experts ten years ago, and particularly over the last five years since the Committee was provided with a broadened and strengthened mandate by the Economic and Social Council in 2016⁵. The IGIF provides the basis and guide for developing, integrating, and strengthening national geospatial information management arrangements in Member States, bridging the geospatial digital divide, and supporting the implementation of the 2030 Agenda and other global development Agendas. Both developed and developing countries are currently implementing the IGIF and developing Country-level Action Plans on an optional and voluntary basis, in accordance with the available guidance and resource materials.

20. At its tenth session, the Committee of Experts recognized that the IGIF represents a considerable achievement and body of work which needs to be sustained and maintained, and that a dedicated high-level group is required to provide oversight and guarantee that the major effort already invested in establishing the IGIF will continue and ensure that the current momentum in mobilizing Member States to embark on the implementation of IGIF is preserved. Therefore, in making decision 10/103, the Committee of Experts endorsed the establishment of a dedicated high-level group of experts, with balanced geographical representation and expertise, as a mechanism to provide strategic leadership, coordination, and oversight in order to ensure the sustained success of the IGIF. This important decision emphasizes the international nature of coordination and cooperation needed to continue the development and implementation of the IGIF under the purview of the Committee of Experts, and that adequate resourcing for the new high-level group is imperative to generate significant impact and to secure effective operation of the group.

21. At that time, several Member States and the Economic Commission for Latin America and the Caribbean (ECLAC) expressed an interest to assist in the development of modalities for the establishment of the high-level group of experts. The Secretariat developed a Concept

⁵ E/RES/2016/27: http://ggim.un.org/documents/E_Res_2016-27_en.pdf

Note to consider some of the initial modalities towards the establishment of the high-level group and convened a ‘brainstorming’ session with the Bureau of UN-GGIM and interested Member States⁶ on 3 December 2020, inclusive of developing and refining the ‘draft’ Terms of Reference for the proposed High-level Group of the Integrated Geospatial Information Framework (HLG-IGIF).

22. On 12 January 2021, by way of letter and in line with the draft Terms of Reference, the Bureau invited each of the five Chairs of the UN-GGIM Regional Committees to coordinate the nomination of their respective regional representatives for the HLG-IGIF and submit them to the Secretariat by 29 January 2021. The nominations were according to the following composition: Africa (4 members); America’s (4 members); Arab States (2 members); Asia and the Pacific (4 members); and Europe (4 members). Given the nature of the strategic leadership, coordination, and oversight requirements of the HLG-IGIF, it was requested that all regional nominations consider key executive leadership and IGIF experience criteria as described in the draft Terms of Reference.

23. The first meeting of the HLG-IGIF was convened virtually on 25 February 2021 and provided the opportunity for the Group to confirm its mandate, objectives, role, membership composition and methods of work. This included the election of its two co-Chairs, Ethiopia and Sweden, and the unanimous adoption of its Terms of Reference⁷. The HLG-IGIF agreed that its immediate priority was to begin considering and developing its initial Programme of Work, comprising a Strategic Plan and Plan of Work, as its roadmap to prioritize and guide its focus and activities for the next 1-2 years. In that regard, the HLG-IGIF agreed that key elements should include: a) refinement and finalization of the IGIF Implementation Guide; b) update of the IGIF Overarching Strategy; c) developing a communication strategy; d) establish a dialogue with the UN Regional Commissions and Regional Committees of UN-GGIM; and e) strengthen cooperation, coordination, and advocate resource mobilization. Further, the Co-Chairs undertook the task to develop and provide some initial thinking towards the preparation of a Strategic Plan for the consideration of the HLG-IGIF at its next meeting. The Summary Report⁸ of the first meeting is available on the dedicated HLG-IGIF website⁹.

24. Given the importance of its establishment phase, the HLG-IGIF agreed to convene its second meeting within three months, on 20 May 2021, to focus on strategic issues and to discuss the initial programme of work and its details. As detailed in the Summary Report¹⁰ of the second virtual meeting the HLG-IGIF discussed at length its draft Strategic Plan, the first iteration of which was prepared by the co-Chairs of the HLG-IGIF, and in recognition of the need to be strategic, executive, and avoid being too technical.

HLG-IGIF Strategic Plan

25. The HLG-IGIF Strategic Plan has been developed based on the mandates and key functions vested to the HLG-IGIF by the Committee of Experts. A key objective was to quickly leverage the collective executive-level expertise, knowledge, experience, and commitment of the members of the HLG-IGIF, and to ensure that appropriate plans are formulated for assisting all Member States, independent of their maturity in geospatial

⁶ Belgium, Cameroon, Germany, Ireland, Italy, Netherlands, Singapore, Sweden, United Kingdom, Tonga, ECLAC, and World Bank

⁷ https://ggim.un.org/documents/HLG-IGIF_ToR_February%202021.pdf

⁸ https://ggim.un.org/documents/Summary_Report_HLG-IGIF_1st_Meeting-25Feb2021.pdf

⁹ <https://ggim.un.org/UNGGIM-HLG-IGIF/>

¹⁰ https://ggim.un.org/documents/Summary_Report_2nd_meeting_rev.pdf

information management. In defining six strategic goals, each with focussed actions and expected outcomes that adhere to the HLG-IGIF Terms of Reference (ToR), the Strategic Plan serves as a guide in proposing, formulating, implementing, and maintaining the IGIF as appropriate for all countries.

26. The six strategic goals pertain to the implementation and sustainability of the IGIF at the country level, and are:

Goal 1: Improve communication

Goal 2: Promote data governance, availability, and accessibility

Goal 3: Strengthen capacity development

Goal 4: Mobilize sustainable funding

Goal 5: Encourage collaboration, exchange and sharing

Goal 6: Oversee improvement and review

27. Following several iterations and consultations, including through the convening of a third virtual meeting of the HLG-IGIF on 29 July 2021 to gain consensus and agreement, the final draft of the HLG-IGIF Strategic Plan is now provided as a background document to this present report for consideration and endorsement by the Committee of Experts.

V. Strengthening communication

28. As noted in the IGIF Implementation Guide in many countries, communication and engagement approaches have not been adequate in raising awareness and improving advocacy of the benefits that can be derived from geospatial information. Furthermore, there is still a lack of awareness of the power of geospatial information, and the critical value gained from combining and integrating this ‘location-based’ data with many other data types. Consequently, geospatial products, services and their societal and economic value is not well understood and are not necessarily as effective and fit-for-purpose as they could be. Simply stated, geospatial information is under-utilized. Demonstrating the benefit of the mandated IGIF in the context of bridging the digital divide is an opportunity to raise awareness, not only of the importance of a comprehensive, integrated approach, but also of the wider importance of location-based data.

29. As identified in the HLG-IGIF Strategic Plan, improving communication, and specifically, developing and implementing a communication strategy to create awareness on the importance and relevance of the IGIF for policy- and decision-makers, is a key strategic goal and a priority. Integrated communication strategies allow countries to meaningfully engage and involve individuals, organizations and other groups in policy and program development, as well as creating awareness, develop partnerships and synergies, avoid duplication and generating momentum. Embedding communications across the implementation process and applying communication techniques to ‘expand the use of data’, including a focus on key concepts, compels reason for change.

30. Therefore, the Secretariat has engaged a communications expert to develop a communication guidance and resource kit that can be adapted and tailored to meet national requirements and circumstances by Member States. The aim of the guidance and resource are to raise awareness, improve advocacy and visibility of nationally integrated geospatial information management and the benefits that can be derived from integrated geospatial information. With key messages designed to emphasize UN ‘ownership’ of the IGIF and to provide a common language for communications, this guidance will support and complement

efforts of the IGIF country project teams of Burkina Faso, Ethiopia, Fiji, Mongolia, Nepal and the Kingdom of Tonga as they design and develop their CAPs and consider implementing the IGIF.

31. In the first quarter of 2021, and with financial assistance provided from the Republic of Korea, the World Bank's Open Learning Campus (OLC) and the Urban, Disaster Risk Management, Resilience and Land Global Practice conducted a valuable and well-attended series of self-paced virtual knowledge learning weeks that focused on 'Strengthening Geospatial Information Management: Using the Integrated Geospatial Information Framework (IGIF).'¹¹ The series builds on work to e-package global learning and innovation for leveraging sustainable development to contribute to socio-economic improvements, and included the efforts of governments, the private sector and academia

32. The first 4-week series was held in February-March 2021, with modules capturing: The Value of Geospatial Information; Introducing the Framework; Solving the Puzzle: Understanding the Implementation Guide; Creating a Country-level Action Plan; and The Socio-economic Benefits Assessment. The facilitated course was attended by 345 participants from 42 countries. The second 4-week series was held in March-April 2021, with modules capturing the key IGIF topics: Governance; Technology; People; and Socio-economic Benefits. The second course was attended by more than 500 participants from 60 countries. The e-Learning course will remain available for at least the next 12 months for participants to complete at their own pace¹².

33. The global virtual events also provided learning in the COVID-19 pandemic context, through knowledge exchange and operational examples of using the IGIF and leveraging country-level experience relevant to World Bank staff, clients and development partners working on these issues across the globe. Given the demand for the virtual knowledge exchange, another series of learning weeks is being scheduled for October 2021.

VI. Interlinkages with the IGIF

34. At its tenth session, in making decision 10/103, the Committee of Experts encouraged the consideration of a programme with a view to strengthening national capacities to effectively manage geospatial resources to modernize national geospatial information arrangements in Member States, in particular in developing countries, and to advocate and raise awareness, as appropriate, including in the context of funding entities.

Advancing the Role of Geospatial Knowledge Infrastructure

35. As was reported to the Committee of Experts at its tenth session¹³, the United Nations Statistics Division and Geospatial Media and Communications (recently renamed Geospatial World) agreed to collaborate towards 'Advancing the Role of Geospatial Knowledge Infrastructure (GKI) in World Economy, Society and Environment' as a means to demonstrate the true value of global geospatial knowledge, the data ecosystem, public-private partnerships, and their contribution as a key enabling contributor to the global development Agendas.

¹¹ <https://olc.worldbank.org/content/strengthening-geospatial-information-management-using-integrated-geospatial-information>

¹² <https://www.edx.org/course/strengthening-geospatial-information-management-using-the-integrated-geospatial-information-framework-igif?index=product&queryID=79caa5433af1eddd20d79a0190d269c2&position=2>

¹³ https://ggim.un.org/meetings/GGIM-committee/10th-Session/documents/E-C.20-2020-23-Add_1-Strengthening-Geospatial-Information-3Aug2020.pdf

36. Although the three-year project was launched in January 2020, many key capacity development elements, including workshops and national stakeholder engagement, were paused due to the onset of the COVID-19 pandemic. In the interim, the project conducted virtual national roundtables and developed an initial GKI discussion document as a basis for further consultation with countries and industry partners. This culminated with a virtual global GKI Summit in February 2021, in which some 780 participants attended from 94 countries. The 2021 Annual Report¹⁴ details the findings of phase 1 of the project, and provides refinements and adaptations for phase 2, particularly highlighting the important relationship between the IGIF and the GKI. The inputs from many stakeholders, and subsequent adaptations, have resulted in the publication of the GKI White Paper ‘The Power of Where: A Geospatial Knowledge Infrastructure to Enhance the World Economy, Society and Environment’¹⁵ in May 2021.

37. The White Paper defines the relationship between the GKI and the IGIF. Anchored by its nine strategic pathways, the IGIF provides the detailed guidance towards ‘integrating’ geospatial information with any other meaningful data to provide understanding and benefit from a country’s national development priorities and the SDGs. As a ‘framework’ (not an infrastructure) the IGIF also recognizes, complements, and supports the implementation of spatial data infrastructures (SDIs) and other geospatial infrastructures such as the GKI. With the IGIF as a reference point, the GKI examines how geospatial data, policies, processes, partnerships, and people make up the geospatial component of knowledge, and calls upon stakeholders of the digital and geospatial ecosystem to work towards the common end of better location-enabled knowledge and decisions.

38. To initiate phase 2 of the GKI project, a three-day GKI geospatial agency leadership training program, (originally scheduled for 2020) and targeting developing country participants, will be held from 17 - 19 October 2021 on the margins of the Geospatial World Forum in Amsterdam. Key objectives of the training program will include understanding: the changing role of geospatial agencies in the 4th industrial age; technology trends and what they mean for geospatial agencies; the developing GKI concepts; integrated geospatial strategies and policies; innovative approaches to partnerships; geospatial standards for a GKI; and the IGIF.

The European Union Location Framework (EULF) Blueprint

39. The European Union Location Framework (EULF) Blueprint¹⁶ is a guidance framework for using location information in policy and digital public services. It is fully aligned with the European Interoperability Framework (EIF)¹⁷, through its consideration of all aspects of ‘location interoperability’. The European Commission has recently implemented the ‘soft launch’ of new features in the EULF Blueprint in relation to location framework guidance and monitoring. The main guidance update involves a comprehensive cross-reference with the IGIF Implementation Guide and nine strategic pathways¹⁸. This cross-referencing was implemented by the European Commission in recognition of the strong synergies and interlinkages between the EULF Blueprint and the IGIF Implementation Guidance. Public administrations planning advances in their use of location data for policy or digital public services can now access, in an integrated way, the combined resources of both frameworks. The IGIF Implementation Guide summary and cross-reference with the

¹⁴ [GKI-Annual-Report.pdf \(geospatialworld.net\)](#)

¹⁵ [GKI-White-Paper.pdf \(geospatialworld.net\)](#)

¹⁶ [EULF Blueprint | Joinup \(europa.eu\)](#)

¹⁷ [The New European Interoperability Framework | ISA² \(europa.eu\)](#)

¹⁸ [Location interoperability guidance and monitoring updates | Joinup \(europa.eu\)](#)

EULF Blueprint¹⁹ provides direct references and relationships to the related strategic pathways, key elements, actions, and good practice templates of the IGIF. Further, each of the 19 EULF Blueprint recommendations are linked to the related strategic pathways and key elements of the IGIF²⁰.

40. This detailed cross-referencing of the EULF Blueprint with the IGIF represents a detailed and comprehensive body of work by the European Commission Joint Research Centre and recognizes fully the importance and value of the IGIF to the European Union. To this end, it is planned to convene a session during the 2021 INSPIRE Conference, from 25-29 October 2021, to discuss the interlinkages of the IGIF with the EULF Blueprint. However, the full benefit of these interlinkages will remain constrained until the refinement and finalization of the IGIF Implementation Guide is completed, as described in Section II earlier in this present report.

Towards a sustainable geospatial ecosystem beyond SDIs

41. The IGIF focuses on the governance, policy, financial, capacity and engagement processes necessary to collect, maintain, integrate, and share geospatial information, through all levels of government and society, in a modern and enabling technology environment. As an integrated framework, the IGIF also helps in other ways. It allows those countries that have already successfully implemented SDI capabilities, and achieved several of the IGIF strategic pathways, to build upon this existing progress and investment. More importantly, the IGIF offers a new paradigm and mechanism to further strengthen nationally integrated geospatial information management and the desired transformational change that is required for the 2030 Agenda and beyond – and this realization has not gone unnoticed.

42. In early 2020, the European Umbrella Organisation for Geographic Information (EUROGI) initiated a discussion, aptly named ‘Beyond Spatial Data Infrastructures (SDIs)’, seeking views as to what ‘future vision’ spatial data focused paradigm or framework would be appropriate in our emerging technological and socio-economic world, a world very different from that which existed when the SDI paradigm was developed in the late 1980s and early 1990s. Sixteen position statements and perspectives from a number of thought leaders from around the world were received and published²¹ in preparation for more in-depth discussion sessions on the topic during the Geospatial World Forum in Amsterdam, originally scheduled in April 2020. Due to the COVID-19 pandemic the Forum was cancelled, prompting EUROGI to hold a webinar on 13 May 2020 on the subject with qualified global geospatial thought leaders.

43. The UN-GGIM Secretariat contributed a position paper entitled ‘Towards an Integrated Geospatial Information Paradigm’ to the discussion and was subsequently invited to participate in the May 2020 webinar. Many of the discussions and perspectives elaborated on the growing limitations of traditional SDI approaches through the ongoing, almost continuous, digital transformation and disruption; limitations that were also recognized by many Member States in the development of the IGIF and its Implementation Guide. It was recognized that the IGIF itself builds on previous efforts in planning and implementing SDIs and NSDIs – these implementations historically focused on the collection of data and the implementation of technologies.

¹⁹ [EULF Blueprint related frameworks: UN-GGIM Integrated Geospatial Information Framework \(IGIF\) | Joinup \(europa.eu\)](#)

²⁰ [Recommendations | Joinup \(europa.eu\)](#)

²¹ [Beyond SDI – EUROGI](#)

44. Aided by the IGIF as the framework of choice for countries to build and strengthen their national geospatial information management arrangements, the subsequent new opportunities offered by the GKI, rapidly changing technological development and disruption, the volume and nature of geospatial information being generated, and changing user expectations and needs, the opportunity and need to aspire to a new ‘Beyond SDI’ vision are both real and timely. Therefore, between November 2020 and July 2021, prompted by a series of informal ‘discussions’ by a small group of ‘motivated’ experts, a position paper entitled ‘Towards a Sustainable Geospatial Ecosystem Beyond SDIs’, and supported by the Policies Portfolio Group of EUROGI, was formulated and a first draft has just been completed and provided as a background document to this present report.

45. The draft position paper aims to initiate a re-thinking and re-imagining of the way in which geospatial information is shared, analyzed, and used in the rapidly changing environment of today and into the future. It provides thoughts and ideas to enable the global geospatial community to be more adequately prepared and to drive and facilitate the transition to a geospatial ecosystem beyond SDIs. The paper takes some initial first steps towards a ‘future vision’, a sustainable geospatial ecosystem beyond SDIs. It reflects on the evolution of SDIs, argues that we have now moved beyond them, presents new and emerging conditions of the future geospatial environment, then sets out the vision of a geospatial ecosystem that goes well beyond today’s SDI conceptual model. The vision is intended as constructive critique, a basis for discussion regarding ‘what comes next’ in the geospatial domain. The paper then provides a call for action to drive and embrace the transition to a sustainable geospatial ecosystem beyond SDIs. In this ‘where do we go from here’ context, the paper targets four key groups: governments and public sector bodies – as the custodians of public good data for a nation, region or city; the geospatial industry – as data, technology and service providers and innovators; academia – as the providers of new knowledge and technologies through research, as producers and users of geospatial research data, and as educators of the future generation of practitioners; and civil society – as the users, consumers, and producers of data, technologies and services.

46. In transitioning towards a sustainable geospatial ecosystem, the draft position paper recognizes the global importance and role of the Committee of Experts and the IGIF, noting “the global geospatial landscape, including greater understanding and awareness, has grown significantly because of UN-GGIM, especially when considering the location-based policy and development demands that are increasing exponentially, and how SDIs evolve to support globally adopted frameworks such as the Integrated Geospatial Information Framework (IGIF). It is therefore appropriate that the re-thinking and re-alignment of geospatial information management and governance is considered and debated through UN-GGIM with its global reach and impact. In this regard, critical initiatives such as UN-GGIM and others deserve to be wholeheartedly supported”. The IGIF is well positioned to address the new and emerging demands of the geospatial ecosystem.

47. The draft position paper is now available for consultation, comment and future development for the global geospatial community, and is provided as a background document to this present report for consideration by the Committee of Experts. Hosted by EUROGI, the first consultation will be in the form of a side event convened on the margins of this eleventh session of the Committee of Experts. This will be immediately followed up with consultations during the virtual Open Geospatial Consortium (OGC) Member Meeting on 13 September 2021, and the Geospatial World Forum in Amsterdam, on 22 October 2021.

VII. Issues and next steps

48. At the most recent virtual meeting of the HLG-IGIF, which took place shortly before this eleventh session of the Committee of Experts (29 July 2021), the HLG discussed and agreed on its Strategic Plan, which is now provided as a background document to this report for consideration and endorsement by the Committee of Experts. The co-Chairs, together with the HLG, have agreed upon a first prioritization of the goals and actions in the Strategic Plan to pursue as a next step. This work, and with commensurate establishment of several sub-groups, will be initiated following guidance and inputs from the Committee of Experts at this session. Three goals were identified for immediate attention (improved communication, capacity development, and sustainable funding). Once progress on the three priority goals is realized, attention will be directed to the remaining goals.

49. In the meeting, it was noted that one responsibility of the HLG-IGIF, on behalf of the Committee of Experts, is the finalization and maintenance of the IGIF and its Implementation Guide. As noted in this and previous reports, much effort has been achieved in formulating and reviewing the Implementation Guide. This valuable resource is currently being widely used as 'draft' documents by many Member States and levels of government. Delays in completing this work are solely due to lack of sufficient resources to finalize comments received from the global consultation and apply a consistent format for digital publication. Once this initial edition of the Implementation Guide is completed, the HLG will decide on an approach to maintain this living document as a future action.

50. Following acceptance of the HLG-IGIF Strategic Plan, a 'Plan of Work' will be formulated and acted on for the next twelve to eighteenth months. The Plan of Work will be anchored with the regional bodies of UN-GGIM to contribute, combine and coordinate the work in the most effective and efficient way. The Plan of Work will consist of the following: periodic HLG-IGIF meetings; and the initiation of sub-groups led by members of the HLG to pursue required actions for each goal. An example of an action involves the implementation of a communication strategy and dialogue with key strategic stakeholders to raise the awareness of the importance of the IGIF and location-based information, and to maintain its relevance in response to changes, such as technology, that impact the IGIF.

Finalizing the IGIF Implementation Guide

51. As detailed in Section II of this present report, and mentioned in paragraph 49 above, attention needs to urgently be directed to finalizing the Implementation Guide. This is necessary for the HLG-IGIF Strategic Plan, and the IGIF itself, to be fully implementable and successful. The Implementation Guide is the foundation for the rest of the future work of the HLG and is the most critical cog in the IGIF suite of products and resources.

52. As was reported to the Committee of Experts at its tenth session²², the IGIF represents a considerable achievement and an even larger body of work. In this regard, there has been immense recognition and support of the IGIF from Member States and the global geospatial community. However, it was also recognized that the development of the IGIF represents an enormous task which is presently under-resourced, and that the burden of bringing the draft Implementation Guide to fruition had been shouldered by a small, but dedicated group.

53. While there is broad global consensus, support and agreement on the critical importance of the IGIF and its Implementation Guide, the resources required to maintain and

²² E/C.20/2020/25/Add.1 https://ggim.un.org/meetings/GGIM-committee/10th-Session/documents/E-C.20-2020-25-Add_1-Integrated-Geospatial-Information-Framework-7Aug2020.pdf

sustain it were quite simply inadequate then – and remain even more so today. This was first observed by the multiple delays in the Secretariat providing the chapters of the Guide in a timely manner in 2019-20 for the global consultation, and then further delays in following up on the review and refinement process in preparation for the tenth session of the Committee of Experts. Subsequently, at its tenth session, held virtually on 26 and 27 August and 4 September 2020, the Committee of Experts, in making decision 10/103, adopted the IGIF Implementation Guide, subject to further refinement and finalization. One year later, this must remain the primary focus, and therefore, a high priority for the HLG-IGIF is the refinement, finalization, and digital publication of the IGIF Implementation Guide, and update of the IGIF Overarching Strategic Framework.

Interlinkages with the IGIF

54. Further, as time has passed, the above shortcoming in the finalization of the Implementation Guide is now being compounded by growing expectation and demand by our global geospatial community, as has been described in this present report. As a Framework for all countries, the IGIF is taking a globally prominent role. It is being implemented in many Member States and referenced in national geospatial policies and strategies, including by development partners such as the World Bank and FAO, as a tangible means to create an enabling environment where national governments can coordinate, develop, strengthen, and promote the efficient and effective use and sharing of geospatial information for policy formulation, decision-making, and innovation. The IGIF is also embedded across all the work areas of the Committee of Experts, as can be observed separately in other reports provided to this eleventh session. As a consensus Framework, the IGIF complements, and supports the implementation of the GKI. It provides direct interlinkages, references and relationships with the EULF Blueprint, and it contains many of the components of the future geospatial ecosystem that exists beyond our present SDIs.

55. Another key interlinkage for the IGIF will be the establishment of the United Nations Global Geospatial Knowledge and Innovation Centre (UN-GGKIC) in Deqing, China. As reported separately at this eleventh session²³, during the intersessional period there has been substantial progress towards establishing the UN-GGKIC. Contained within its Memorandum of Understanding (MoU), the Centre's overarching goal is to work towards the ambitions of implementation of the IGIF set by Member States, to develop capacity, promote and support the required innovation, leadership, coordination and standards to develop, strengthen, integrate and deliver national geospatial information policy, data, systems, tools, services and capabilities into their national government development policies, strategies and arrangements. As a 'knowledge' Centre, the UN-GGKIC will link and promote collaborative modalities of actions within the global UN-GGIM community through the IGIF, its Implementation Guide, and Country-level Action Plans.

56. While still a 'work in progress,' the IGIF, as an integrated Framework, is a new mechanism to strengthen nationally integrated geospatial information management and the desired transformational change that is required for countries and the global geospatial community. The strategic leadership, governance, guidance, and championing at this foundational phase of the IGIF are crucial, the steps and decisions taken collectively by the HLG-IGIF will have profound impacts on all countries, particularly developing countries as the Member States strongly support the work in words and actions. That said, the IGIF fundamentally, and critically, needs to be adequately resourced.

VIII. Points for discussion

²³ E/C.20/2021/4/Add.1

57. The Committee of Experts is invited to:

- (a) Take note of the present report, express its views and provide guidance on the activities and progress of the HLG-IGIF since its establishment;**
- (b) Express its views on the Strategic Plan of the HLG-IGIF with a view towards its endorsement, and provide guidance on the three priority goals recommended by the HLG-IGIF for its initial Plan of Work;**
- (c) Express its views on the importance and urgency to resource the refinement and finalization of the IGIF's Implementation Guide, updating its Overarching Strategic Framework, completing the resource materials to assess, design and develop Country-level Action Plans, and to digitally publish the IGIF suite of products;**
- (d) Provide further guidance towards resources to adequately sustain the IGIF as a living document for Member States and the global geospatial community;**
- (e) Provide any further guidance regarding the way forward for Member States to implement the IGIF: as a forward-looking framework at the country-level; across the work areas of the Committee of Experts; its interlinkages with other regional to global frameworks; and its continued adoption in response to increasingly challenging national, regional, and global demands.**