Policy and legal frameworks, including issues related to authoritative data

Note by the Secretariat

Summary

The present paper contains the report prepared by the Working Group on Policy and Legal Frameworks for Geospatial Information Management for consideration by the Committee of Experts on Global Geospatial Information Management.

At its thirteenth session, held from 2 to 4 August 2023, the Committee of Experts adopted decision 13/112, in which it appreciated the efforts of the Working Group to engage and collaborate with other functional groups and key partners of the Committee. The Working Group was encouraged to continue its engagement and communication with the Committee and its regional committees to promote and raise awareness on the importance of sound and robust policy and legal frameworks for achieving the societal, environmental and economic benefits from geospatial information management. The Committee also endorsed the paper entitled “Authoritative data in an evolving geospatial landscape: an exploration of policy and legal challenges” and noted that the paper was intended as a policy and legal guide to help national geospatial entities, including national mapping, cadastral and land registration authorities, as well as the private sector and civil society, to better produce, sustain and govern the use of geospatial information that was deemed authoritative and trusted. The paper was to be used as a supplement in the implementation of the strategic pathways of the United Nations Integrated Geospatial Information Framework relating to the authority and authoritativeness of data.

The Committee of Experts further acknowledged that, given the increasing global challenges and the related need for reliable data, the Working Group’s planned activity related to addressing the issue of geospatial information for public good, authoritative data and exploring fit-for-purpose authoritative geospatial data and applications in crises and disasters was timely. The Committee encouraged the Working Group to continue analysing the complex policy and legal issues in geospatial information management and to further consider the concept of trust in data, the associated data quality and metadata standards, and ensuring responsible and ethical utilization of data. Lastly, the Committee of Experts noted the convening of the next meeting of the Working Group in Belgium in February 2024 in partnership with the United Nations Global Geospatial Information Management Regional Committee for Europe and EuroGeographics, to be held back-to-back with the meeting of the EuroGeographics Policy Knowledge Exchange Network to maximize the participation of and input from Member States, relevant stakeholders and policymakers.

In this present report, the Working Group discusses its leadership, its membership, its activities and progress made during the intersessional period. The Working Group also provides information on the discussions and recommendations from its second in-person expert meeting, held in Leuven, Belgium, from
20 to 22 February 2024, including: (a) to develop policy and legal frameworks that can be implemented; (b) to communicate about the frameworks in clear and intelligible language; (c) to engage further with the wider community (in the areas of data, artificial intelligence, legal issues, technology and innovation) on how ongoing policy and legal developments could benefit from and incorporate a geospatial “lens” or consideration; and (d) to further strengthen interlinkages, joint activities, interactions, seminars and meetings related to policy and legal frameworks and authoritative data with other functional groups of the Committee of Experts, such as the Subcommittee on Geodesy, the expert group on land administration and management and the Working Group on marine geospatial information. In the report, and in the context of its second in-person meeting, the Working Group also notes the need to consider policy and legal gaps related to geospatial information management at the national and subnational levels, and to address these gaps collaboratively, together with the wider community. The Working Group calls for the overall consideration of diversity, equity and inclusion principles in developing policy and legal frameworks.

In this report, the Working Group provides an overview of progress made in the development of the draft paper titled “Authoritative, fit-for-purpose geospatial data for crises”, which has been shaped through valuable feedback by members of the Working Group. This paper, a continuation of the paper entitled “Authoritative data in an evolving geospatial landscape: an exploration of policy and legal challenges”, is aimed at addressing policy and legal considerations related to authoritative data within the context of crises, building on a fit-for-purpose approach and leveraging the “control-trust continuum” presented in the earlier paper in an evolving geospatial landscape to explore how policy and legal instruments can establish the “preconditions for trust”. The Working Group notes that research and consultation will continue, with the goal of presenting and discussing preliminary findings at the Fourteenth session of the Committee of Experts, with the final version to be presented to the fifteenth session of the Committee, in August 2025, following a global consultation process during the next intersessional period.

The Working Group also discusses its concept paper entitled “Geospatial data for public good”, which is part of its efforts to offer guidance to Member States. The concept paper is based on a review of key legal and policy aspects of the “public good”. The Working Group is presenting the concept paper to the Committee at its Fourteenth session, while simultaneously seeking views and guidance from the Committee.

The report also includes a discussion of the future priorities of the Working Group aligned with its workplan for the period 2023–2024 aimed at addressing complex and emerging policy and legal issues in geospatial information management, including the implications of artificial intelligence. The Working Group seeks to continue to engage with the policy and legal community, as well as a broad range of experts across domains.
I. Introduction

1. The geospatial information ecosystem is evolving from data to knowledge and insights. In this process of transformation, technology remains the enabler while drivers for change include unified solutions to global challenges, equitable access to knowledge and bridging the geospatial digital divide. The report discusses emergent and complex policy and legal issues that need to be addressed collectively. As technology continues to advance, it is important to keep pace with the legal and regulatory frameworks and how they enable and impact geospatial information management. The 2023-2025 work plan’s activities, deliverables and key messages of the Working Group on Policy and Legal Frameworks for Geospatial Information Management are presented as an annex to the last year’s report (E/C.20/2023/16/Add.1), part of efforts to ensure the availability, accessibility and integration of fit-for-purpose geospatial data, including in near real time, and responsive to societal challenges.

2. The Working Group has been active throughout the intersessional period and, held virtual meetings and its second in-person expert meeting in Leuven, Belgium, from 20 to 22 February 2024, where it welcomed its new co-Chair from Saudi Arabia. The Working Group continued the implementation of its 2023-2025 work plan, in particular, related to the advancement of two papers “Authoritative, fit-for-purpose geospatial data for crises” and “Geospatial data for public good.”

3. The paper on “Authoritative, fit-for-purpose geospatial data for crises” is the continuation of the paper "Authoritative data in an evolving geospatial landscape: an exploration of policy and legal challenges", and addresses policy and legal considerations of authoritative data within the context of crises, building on a fit-for-purpose approach and leveraging the “control-trust continuum” concept presented in the paper. The ongoing activity focuses on policy and legal frameworks, as well as institutional arrangements, aimed at preparing Member States for crisis situations by leveraging existing frameworks and resource materials developed by the Committee of Experts and its functional groups.

4. The concept paper on “Geospatial data for public good" explores both substantive and formal elements of a sound policy and legal framework and discusses different approaches to geospatial data that favor the public good. Bearing in mind that effective policy and legal frameworks will evolve over time and recognizing that the concept of ‘public good’ is to be applied on a case-by-case basis, the paper identifies ‘legitimate interests’ as criteria that can guide countries in their assessment of whether the use of geospatial data can be considered for ‘public good.’

5. The Working Group is also aware of the influence of emerging technologies such as artificial intelligence (AI) on geospatial information management. The Working Group notes the criticality of understanding the impact that AI is having on the current geospatial information ecosystem as well as how the evolving national policy and legal frameworks in regulating and promoting AI, and its impacts on the future geospatial information ecosystem. The Working Group urges the geospatial community to get involved in and shape the development of these laws, regulations, and policies at both the national and where appropriate, regional level. AI and other key considerations impact the path forward for the Working Group and must be considered, in order to enable the Working Group to remain responsive to contemporary challenges and opportunities.

6. This present report informs the Committee of Experts on the Working Group’s progress in the development of the paper on “Authoritative, fit-for-purpose geospatial data for crises” and the concept paper “Geospatial data for public good”. The report also discusses the complex policy and legal issues being addressed collaboratively including the impacts from emerging technologies, innovative uses of available and accessible geospatial information, and artificial intelligence. The Committee of Experts is invited to take note of
the report and to express its views on the Working Group’s activities and considerations including its intention to continue its efforts in addressing the issue of authoritative data. Points for discussion and decision are provided in paragraph 38.

II. Membership and activities

7. During this intersessional period, the Working Group composed of expert representatives from sixteen Member States, five partnering organizations and two thematic networks of the Committee. The Working Group is co-Chaired by Canada and Saudi Arabia and convened three virtual meetings and one in-person meeting.

8. At the twentieth virtual meeting of the Working Group on 12 October 2023, the Working Group noted the following considerations when implementing its work plan, activities and deliverables: (a) the need for capacity development; (b) better awareness of biases in its analyses; (c) the language around ‘authoritative’ and ‘fit-for-purpose’; (d) how to communicate effectively to non-legal audiences; (e) how to ensure ‘fit-for-purpose’ data is available and reflects the needs and reality of on-the-ground users, especially for real-time decision-making in a disaster response situation; (f) trust, ethics, accountability and issues around AI and machine learning; (g) engagement and/or collaboration with regional committees, functional groups, and thematic networks of the Committee; and, (h) noting that the participants are diverse, not merely expert representatives of Member States.

9. Also, the Working Group discussed its work plan and activities, including:

(a) The paper on “Authoritative, fit-for-purpose geospatial data for crises,” led by Canada;

(b) The concept paper on “Geospatial data for public good,” currently led by Canada and supported by the International Bar Association (IBA);

(c) The presentation for the IBA Annual Conference in Paris (29 October to 3 November 2023) aimed at socializing key outcomes and collaborative activities; and,

(d) The unique nexus between the legal and geospatial communities, including the need to strike a balance between precisely conveying key legal concepts and implications, while communicating in a manner that is accessible and understandable to non-legal stakeholders; and, the importance of engaging in legal matters that impact geospatial information management to ensure that Member States address risks and are equipped with robust legal frameworks. It was also highlighted that, as technology continues to advance, it is important to keep pace with applicable legal and regulatory frameworks.

10. The Working Group took note of efforts to integrate the terrestrial, maritime, built and cadastral domains. This inter-functional group activity was scoped by the Expert Group on Land Administration and Management and the Working Group on Marine Geospatial Information with the participation of the Subcommittee on Geodesy, the International Hydrographic Organization and the United Nations Global Geodetic Centre of Excellence. The Working Group recognized the importance to engage and collaborate with regional committees as appropriate and noted its track record in collaborating with other functional groups, as shown during the preparation of the paper: “Authoritative data in an evolving...

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1 Algeria, Australia, Belgium, Canada, China, Finland, India, Italy, Malaysia, Mexico, Morocco, Poland, Saudi Arabia, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America.


3 Academic Network and Private Sector Network.
geospatial landscape: an exploration of policy and legal challenges” which noted the nature of authoritative data in these domains.

11. The Working Group participated in the 2023 IBA Annual Conference in Paris virtually and the co-Chair (Canada) recorded a presentation with key messages including the functions and objectives of the Working Group was well its work on addressing the issue of authoritative data. The presentation was delivered on 3 November 2023.

12. The second expert meeting of the Working Group was held in Leuven, Belgium, on 20-22 February 2024. This meeting was hosted by the National Geografisch Instituut (National Geographic Institute) of Belgium in partnership with the United Nations Global Geospatial Information Management Regional Committee for Europe (UN-GGIM: Europe) and EuroGeographics. The expert meeting of the Working Group was held back-to-back with the meeting of EuroGeographics's Policy Knowledge Exchange Network to maximize the participation of and input from Member States, relevant stakeholders, and policymakers.

13. This second expert meeting incorporated the workshop on “Authoritative, fit-for-purpose geospatial data for crises” and also allowed participants to discuss other items, including geospatial data for the public good and issues arising from the evolving technological landscape and AI.

14. Thirty-one participants, including legal and geospatial expert representatives from sixteen Member States and other invited international organizations, met over three consecutive days at the Katholieke Universiteit Leuven (KU Leuven), Belgium. During the meeting, members of the Working Group had the opportunity to exchange views with members of the Policy and Knowledge Exchange Network of EuroGeographics.

15. The Working Group recognized the need to develop 'practical' frameworks that can be implemented and to better communicate on policy and legal frameworks. The Working Group decided to engage further with the wider data, AI, legal, technology and innovation communities to consider how ongoing policy and legal developments could benefit and incorporate the geospatial components and considerations. In this context, the participants also reiterated the importance of further creating interlinkages, joint activities, seminars, and meetings with the other functional groups of the Committee of Experts, in particular with the Task Team on Geospatial Information for Climate Resilience, to bring together perspectives and develop joint activities related to “Authoritative, fit-for-purpose geospatial data for crises”.

16. The Working Group considered and discussed the concept and content of the papers “Authoritative, fit-for-purpose geospatial data for crises’ and ‘Geospatial data for public good,’ as well as exchanging views on the evolving technological landscape and AI.

17. The Working Group accepted the offer by Saudi Arabia to host its third in-person expert meeting in Riyadh, Saudi Arabia, in October 2025.

18. At its twenty-first virtual meeting held on 26 March 2024, the Working Group recalled the outcomes of its meeting in Leuven and noted the ongoing activities to implement its 2023-2025 work plan. During the meeting, presentations provided an update on the developments on the paper “Authoritative, fit-for-purpose geospatial data for crises,” the concept paper on “Geospatial data for the public good,” and a summary conclusion on the evolving geospatial and technological landscape, AI and its regulations.

19. In the development of the paper “Authoritative, fit-for-purpose geospatial data for crises,” the Working Group noted the necessity of considering the management and use of geospatial data throughout different phases of a crisis, the need to establish clear policy and legal frameworks in advance of a crisis, and to be able to appropriately respond to challenges on the ground. The Working Group noted ongoing developments in the legal and policy frameworks related to AI, and urged the geospatial information community to engage and
involve in the consideration and development of laws, regulations, and policies at the national, regional and international levels.

20. At its twenty-second virtual meeting held on 25 June 2024, the Working Group was provided with an update on the status of the two deliverables of the work plan 2023-2025 specifically on the paper “Authoritative, fit-for-purpose geospatial data for crises,” and the concept paper on “Geospatial data for the public good”. The Working Group considered and discussed issues of interest related to the implementation of its work plan and welcomed the presentation by the Centre for Spatial Law and Policy that helped inform the Working Group on matters related to AI and its regulation. The Working Group expressed the need to further raise awareness on the topic to the Committee of Experts at its fourteenth session. At this meeting, the Working Group took note of and adopted the draft of the present report and entrusted the Co-Chair and Secretariat to finalize and submit it to the fourteenth session.

III. Paper “Authoritative, fit-for-purpose geospatial data for crises”

21. In this present report, the Working Group provides an overview of advancements made in the development of the draft paper titled “Authoritative, fit-for-purpose data for crises.” This paper, a continuation of the paper endorsed at the thirteenth session of the Committee of Experts titled “Authoritative data in an evolving geospatial landscape: an exploration of policy and legal challenges”, addresses policy and legal considerations of authoritative data within the context of crises. As crises progress through stages from pre-crisis to acute and into post-crisis, timely access to information is critical to facilitate a rapid response to acute situations. This requires sound and robust legislations, regulations and policies grounded within an enabling national policy and legal framework.

22. The paper has three primary aims: (a) to support governments in navigating considerations and trade-offs in geospatial data characteristics and principles that may arise during an acute crisis scenario and address accompanying limitations; (b) to offer guidance and consider the perspective of responders navigating the challenges associated with providing on-the-ground, real-time responses to crises informed by this data; and, (c) building on this crisis responder perspective, to shine a light on the data user experience with an emphasis on identifying reliable data sources while maintaining quality and standards given the constraints that a crisis scenario may present. In addressing these aims, the paper will draw from the “control-trust continuum” presented in the earlier paper "Authoritative data in an evolving geospatial landscape: an exploration of policy and legal challenges" (often referred to as Part I). The continuum illustrated that oversight of authoritative geospatial data exists along a spectrum, with public sector, private sector, and civil society instruments positioned between endpoints of ‘control’ and ‘trust.’ The paper “Authoritative, fit-for-purpose data for crises” (often referred to as Part II) will build on this work with a particular focus on crisis and disaster use cases, identifying the diverse data sources and evolving roles of data providers across sectors in ownership and custodianship. Understanding these roles and sources is crucial for developing effective policy and governance frameworks to ensure the provision of fit-for-purpose geospatial data for crises and disasters.

23. The paper examines policy and legal considerations that provide for the availability, accessibility, integration, and sharing of fit-for-purpose geospatial data, in near real-time. Key considerations include: (a) data privacy and security; (b) intellectual property and licensing; (c) open data initiatives; (d) barriers to information exchange (e.g., language, legal/standards, systemic barriers) and interoperability; (e) upholding accuracy, reliability, and timeliness of geospatial data; (f) facilitating cross-border data sharing; and (g) development and maintenance of supporting data infrastructure and technologies. Preliminary findings regarding institutional arrangements, notably governance, underscore
the importance of clear mandates and responsibilities to streamline decision-making, minimize duplication, and ensure accountability for data collection, access provision, analysis, and dissemination of authoritative data, with defined stakeholder roles crucial for trust-building during emergencies. In addition, coordination mechanisms facilitate collaboration and information sharing among government agencies, departments, and organizations in disaster management, optimizing expertise and resources through inter-agency collaborations, coordination centers, and partnerships.

24. The paper also examines the robust legal and governance frameworks that oversee data sharing among government agencies, private sector partners, and international organizations in disaster response, clarifying usage rights, privacy protections, and liability considerations to foster trust and collaboration among stakeholders. Based on this analysis, the paper offers guidance for decision-makers, including in governance of the following areas: data standardization and interoperability, mechanisms to support capacity building and training, monitoring, and evaluation of infrastructure and data systems, and adaptive and responsive management approaches.

25. The paper leverages existing frameworks and resource materials of the Committee of Experts and its functional groups. The paper’s scope was shaped through valuable feedback from the Working Group, including recommendations such as exploring use cases of the various phases of disasters and engaging with a broader community on data, AI, technology, and innovation implications. It is aimed at assisting Member States to be ready to respond in crisis situations.

26. Suggestions have been made to explore interlinkages with functional groups of the Committee of Experts through use cases on frameworks, such as search and rescue, from different domains (e.g., marine/land) and establishing ties with the Task Team on Geospatial Information for Climate Resilience. The Working Group notes that consultation will continue, with the goal of presenting and discussing preliminary findings at the Fourteenth session of the Committee of Experts. The paper is expected to be presented to the Fifteenth session of the Committee in August 2025, following a global consultation process.

IV. Concept paper “Geospatial data for public good”

27. The Working Group is also presenting to the Committee its progress on the development of the concept paper “Geospatial data for public good”, and looking for feedback and guidance on the next steps. This concept paper was developed as part of efforts aimed at sharing key legal concepts of relevance, and providing guidance to Member States based on a review of the available case law. The paper considers that effective policy and legal frameworks will evolve over time and respond to societal progress and technological developments. As noted by the Working Group, it is important to clarify the concept of public good, and its policy and legal considerations.

28. The paper discusses different approaches to geospatial data for public good including risk-based, rights-based, and market-based approaches. The rights-based approach considers that governments must recognize, develop and promote the common good by defining and implementing rights, including through regulation and litigation processes. The market-based approach emphasizes the definition and value of the growing geospatial marketplace and how governments can leverage market-based instruments to capitalize on geospatial opportunities arising from the technological evolution to address current global challenges. The risk-based approach focuses on the apprehension of harm to a human being. The approach consists of assessing levels of risks and recommending mitigating measures accordingly. The Working Group suggests focussing on the risk-based approach to frame the public good, as it provides a multi-dimensional approach.
29. The paper further explores both substantive and formal elements of a sound policy and legal framework, including: (a) favouring the public good; (b) recognizing the perspectives and interests of stakeholders and partners; (c) considering user needs; and (d) implementation with fairness and due process. The paper assumes that the goal of any effective policy and legal framework for geospatial information management is to maximize the utility and value of geospatial information with due consideration for privacy, confidentiality, security and risks. This underlines the importance of transparency as a foundation for trust in data.

30. The concept paper looks at how different approaches to the public good reveal a new angle on the “control-trust continuum” introduced in the paper “Authoritative data in an evolving geospatial landscape: an exploration of policy and legal challenges.” At first sight, risk-based approaches are located along the continuum line, with high risk correlating to the use of instruments on the control side of the continuum, and lower risks with the trust side.

31. Finally, the concept paper considers that a policy and legal framework is sound when it favours the public good while recognizing the perspectives and interests of stakeholders and partners, and when conducted with fairness and due process. The concept paper proposes three approaches to the Committee of Experts cognizant that it must not be a case of ‘cut-paste-use.’ They are meant to be considered together with national legal experts, relevant policy communities, and adapted and tailored to national circumstances including appropriate national (or sub-national) policy and legal frameworks.

V. Discussion of the future priorities including the implications of artificial intelligence

32. Emerging technologies have always had a profound impact on geospatial information management and use. The recent advent of AI has already transformed the geospatial landscape, and is expected to continue and likely to accelerate in the near future. The Working Group notes the impact of AI on the current and future geospatial information ecosystem, and therefore is exploring AI and its regulation as an emerging topic of interest, as it proceeds to implement its work plan. To this end and from initial discussions, the Working Group notes the importance of mobilizing and keeping the wider community informed on the definition and development of laws on AI at national, regional and global levels, including keeping up-to-date with recommendations and reports from the Secretary-General’s AI Advisory Body. The Working Group believes a holistic approach, that includes human resources with a wide range of skills and experiences involved in the deployment and development of AI systems, especially geospatially related, is necessary to balance the potential and benefits of AI together with its potential negative impacts. The Working Group has agreed to add AI updates and developments at upcoming proceedings and will continue to explore this topic, in collaboration with others, as appropriate and needed.

VI. Final considerations and summary

33. The present report provided an overview of the activities of the Working Group during the intersessional period and in particular related to the latest developments on membership, participation and contributions, the two papers identified under the work plan, and discussions on future policy and legal priorities given the evolving geospatial landscape.

34. The Working Group will continue to analyze complex policy and legal issues in geospatial information and provide Member States with guidance and recommended actions to establish, strengthen or organize their national (or sub-national) arrangements toward sound and robust policy and legal frameworks for achieving the sustainable societal, environmental, and economic benefits from geospatial information management. These complex policy and legal issues relate to: the availability, accessibility and widest
application of geospatial information; authoritative data, authority and custodianship; and, public good together with open data, personal data, data privacy, data protection, data licensing, and the security and misuse of data. The Working Group’s current efforts, the paper “Authoritative data for crises” and the concept paper “Geospatial data for public good,” reflect this objective.

35. The Working Group also recognizes the increasing significance of emerging technologies and is interested in exploring the policy and legal considerations surrounding the integration of AI into the geospatial domain, including associated legal and regulatory frameworks. Understanding this context is vital to identifying key challenges and opportunities related to AI in the geospatial domain from a policy and legal standpoint. By delving into these issues and engaging with the policy and legal community alongside a diverse range of experts across various domains, the Working Group hopes to contribute to the development of a sound and robust policy and legal environment that facilitates responsible use of AI in global geospatial applications, thereby optimizing its advantages to the community while reducing risks.

36. Additional considerations will be explored by the Working Group going forward with regard to work plan implementation; in particular, regarding the following activities: sustaining and building legal-policy capacity to respond to the needs of Member State; connecting legal and geospatial experts, along with the relevant policy community; collaboration with functional groups of the Committee, in particular the Subcommittee on Geodesy, the Expert Group on Land Administration and Management and the Working Group on Marine Geospatial Information; and, explore opportunities and issues related to the integration of terrestrial, maritime, built and cadastral domains and their related infrastructures. These activities require sustained efforts to develop and sustain global policy and legal capacity and knowledge.

37. The Working Group will continue with its virtual meetings in the upcoming inter-sessional period. The Working Group however emphasized the value of in-person exchanges and interactions amongst members and relevant stakeholders and bringing the wider community together to explore the geospatial and legal nexus. In this regard, the Working Group welcomes the offer of Saudi Arabia to host the third in-person expert meeting of the Working Group in Riyadh, Saudi Arabia, in October 2025. The Working Group expressed its appreciation to the National Geographic Institute of Belgium, UN-GGIM: Europe, and EuroGeographics for the successful convening of its second in-person expert meeting in Leuven, Belgium from 20-22 of February 2024.

VI. Points for discussion

38. The Committee of Experts is invited to:

(a) Take note of the present report, express its views, and provide guidance to the Working Group on its progress and efforts to consider and propose feasible policy and legal guidance to address real-world situations;

(b) Take note of the progress and consider the preliminary findings related to the preparation of the paper “Authoritative, fit-for-purpose data for crises”, and the broad global consultation process after the Fourteenth session with the view to present the paper to the Committee of Experts at its Fifteenth session in August 2025;

(c) Take note of the progress in the development of the concept paper “Geospatial data for public good” and express views on the concept and considerations related to geospatial data for public good, and provide guidance on next steps;
(d) Take note and express views on the increasing significance and impact of emerging technologies and artificial intelligence on geospatial information management and the future geospatial information ecosystem and in this context, for the Working Group to continue identifying key challenges and opportunities related to emerging technologies and artificial intelligence in the geospatial domain from a policy and legal standpoint;

(e) Take note that the third expert meeting of the Working Group will be hosted by Saudi Arabia in Riyadh in October 2025.