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### Information Management

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Item 14 of the provisional agenda\*

**Policy and legal frameworks, including issues related to authoritative data and emerging technologies**

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### **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 fourteenth session, from 7 to 9 August 2024, the Committee of Experts adopted decision [14/112](#), in which it expressed its appreciation for the activities and progress achieved during the intersessional period under the leadership of Canada and Saudi Arabia. The Committee noted the progress on the concept paper entitled “Geospatial data for public good” and encouraged the working group to continue to analyse the complex policy and legal issues with particular attention to the impact of emerging technologies and trends on geospatial information management, including artificial intelligence and machine learning, and to explore appropriate legal and regulatory frameworks in consultation with Member States and partners.

The Committee of Experts also noted the progress related to the preparation of the paper entitled “Authoritative, fit-for-purpose data for crises”, and welcomed the upcoming broad global consultation process after the fourteenth session of the Committee of Experts with a view to presenting the paper to the Committee at its fifteenth session, in August 2025. The Committee welcomed the convening of the third in-person meeting of the working group, to be hosted by Saudi Arabia in Riyadh in October 2025, and encouraged Member States, in particular those in the region, to seize the opportunity to work together to ensure robust legal and regulatory frameworks for effective geospatial information management.

In the report, the working group provides information on the progress of its activities during the intersessional period on policy and legal issues in geospatial information management, with particular attention to the impact of emerging technologies and trends and for the positioning of geospatial information to address global challenges. The report contains details of the preparation of key deliverables provided as background documents for discussion, guidance and endorsement by the Committee of Experts, on authoritative data for crises, artificial intelligence and geospatial data for the public good.

The paper entitled “Authoritative geospatial data for crises”, which is the subject of a global consultation, supports data users and producers in identifying and mitigating potential trade-offs that can arise when responding to a crisis, outlining related policy and legal considerations for Member States. Building on previous deliverables of the working group, the paper highlights that enabling governance systems, including robust policy and legal frameworks and institutional arrangements, are necessary preconditions for trust in authoritative data for crisis response. Lastly, the paper offers guidance for data users and providers to identify gaps in governance regarding authoritative data in crisis applications to promote transparency and mitigate trade-offs in essential data characteristics.

To address decision [14/112](#) on continuing “to analyse the complex policy and legal issues” the working group is providing a concept paper on addressing potential implications for the geospatial sector on developing a legal and regulatory framework on artificial intelligence which highlights the need for a strategic framework to ensure that emerging artificial intelligence legal and regulatory frameworks adequately incorporate the unique requirements of the geospatial sector. It identifies priority actions, such as mapping existing regulations, analysing the impact on geospatial use cases, facilitating stakeholder consultation and promoting proactive engagement with policymakers and developing capacity for compliance and adaptation. A “Rallying statement to the Geospatial Sector on the development of a legal and regulatory framework for artificial intelligence” is also provided, with an emphasis on the urgency of establishing clear, ethical and comprehensive artificial intelligence regulations for the geospatial sector, containing a call for collective action to promote transparency, safeguard human rights and maximize the potential of geospatial artificial intelligence innovation. The statement is accompanied by a “Review of global artificial intelligence regulations in geospatial applications”, showcasing the evolving regulatory landscape, summarizing developments across regions and supporting informed decision-making and regulatory coherence among Member States.

Following the adoption, in September 2024, by Member States of the Pact for the Future and its annexes: the Global Digital Compact and the Declaration on Future Generations, the working group adjusted its existing concept paper on “Geospatial data for public good” to provide stronger ties between geospatial information management, the Global Digital Compact, and progress towards the Sustainable Development Goals. The updated concept paper is provided for information as a background document to the report.

The report also contains details of upcoming priorities of the working group and its workplan for the period 2025–2027 aimed at continuing to help Member States to address complex policy and legal issues in geospatial information management, including as related to authoritative data and emerging technologies. As set out in its updated workplan, the working group seeks to continue to engage with the policy and legal community, as well as a broad range of experts across domains. The working group aims to further respond to key priorities within a rapidly evolving technological environment including artificial intelligence and autonomous vehicles and further welcomes considerations and views from Member States on policy and legal priorities.

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## I. Introduction

1. In 2024, in making decision 14/112, the Committee of Experts encouraged the working group to continue to analyse the complex policy and legal issues with particular attention to the impact of emerging technologies and trends on geospatial information management, including artificial intelligence (AI) and machine learning, and to explore appropriate legal and regulatory frameworks in consultation with Member States and partners.
2. The geospatial information ecosystem continued to evolve rapidly, similar to the application and use of emerging technologies, such as AI. The report elaborates on emergent and complex policy and legal issues that need to be addressed collaboratively with Member States and other stakeholders. As technology continues to advance, it remains vital to keep pace with related legal and regulatory frameworks. The activities and deliverables described in the updated Work plan 2025-2027 are part of this effort to ensure the availability, accessibility and integration of fit-for-purpose geospatial data in response to societal challenges.
3. The working group has been active throughout the intersessional period in terms of its membership and activities and held regular virtual meetings. In accordance with decision 14/112 in which the Committee of Experts welcomed the convening of the third in-person meeting of the working group, to be hosted by Saudi Arabia in Riyadh in October 2025, the working group has started the planning of its third in-person meeting. During the intersessional period, six background documents were prepared by the working group for consideration by the Committee at its fifteenth session, including: 1) an updated version of the concept paper on “Geospatial data for public good,” 2) a paper on “Authoritative data for crises,” 3) a paper on “Potential implications to the Geospatial Sector of the Developing Legal and Regulatory Framework on AI”, 4) a rallying statement for the Geospatial Sector on the Development of a Legal and Regulatory Framework for AI, 5) a compendium of regulations related to geospatial AI, and, 6) an updated Work plan for the period of 2025-2027.
4. Regarding the paper on “Authoritative data for crises,” a global consultation was completed in April and May 2025 which provided valuable considerations, feedback, and expert perspectives which contributed to a more comprehensive and focused paper.
5. The paper on “Data for public good in the digital world” provides key updates to the concept paper on “Geospatial data for public good,” initially presented to the Committee for consideration at its fourteenth session. As background, the initial paper explored both substantive and formal elements of sound policy and legal framework and discussed 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 identified ‘legitimate interests’ as criteria that can guide countries in their assessment of whether the use of geospatial data can be considered for ‘public good.’ Updates to the paper were made during the intersessional period to highlight critical linkages and insights related to the [Pact for the Future](#) and its annexes, adopted at the Summit of the Future held at the United Nations General Assembly on 22-23 September 2024. The paper provides initial guidance regarding policy and legal frameworks for approaching data and emerging technologies for the public good, grounded in an era of digital transformation and with the goal of advancing and accelerating the [Sustainable Development Goals](#) (SDGs).
6. To address the continuing need to respond to the impacts of emerging technologies, such as AI, on National spatial data infrastructures (NSDIs), as well as the important role of policy and legal frameworks at this critical juncture, the working group created several key documents, provided as background to this agenda item. These background documents include a concept paper on potential implications of AI on global geospatial information management, and the development of a compendium of regulations related to geospatial AI in the world today, which provides important context, good practices and

insights of interest to Member States. The working group also prepared a ‘rallying statement’ which calls on all Member States and observers participating to proceedings of the Committee of Experts to take action on AI and work together collaboratively, supporting global geospatial readiness to address this transformative technology.

7. Beyond AI, the working group is also looking at the impact of other key emerging technologies; for example, related to the policy and legal implications of automated navigation and high-definition maps in transportation using geospatial information management. Initial information on these and other projects is included in the Work Plan 2025-2027. Updates and key information will be presented to the Committee in the coming sessions.

## **II. Membership and activities**

8. During the intersessional period, the working group comprised of experts from sixteen Member States<sup>1</sup>, six partnering organizations<sup>2</sup> and two thematic networks<sup>3</sup> of the Committee. The working group continued to be led by its co-Chair, Canada and Saudi Arabia. The working group convened five virtual meetings during the intersessional period and is planning an in-person meeting for late 2025. All virtual meetings focused on progress towards the deliverables and activities identified in its previous Work plan for 2023-2025, as well as addressing the relevant decisions and guidance of the Committee provided at the fourteenth session.

9. The working group is also exploring continued collaboration and alignment with the terrestrial, maritime, built and cadastral domains, as well as other activities being undertaken by the Committee and regional divisions, including attending virtual meetings of relevant Working Groups, as appropriate.

10. To further explore opportunities for collaboration with other partners, such as the International Bar Association, the working group continued to engage including during its global consultation on the paper on “Authoritative data for crises”. The working group continued to engage with legal experts, policy specialist and professionals working humanitarian and risk reduction domain.

11. Finally, in accordance with decision 14/112 of the Committee when it welcomed the invitation by Saudi Arabia to host its third expert meeting, the third expert meeting is confirmed to be held in Riyadh, Saudi Arabia on 7-9 October 2025.

## **III. The paper on “Authoritative data for crises”**

12. In the present report, the working group provides an overview of the paper: “Authoritative data for crises,” as well as a summary of feedback received during the global consultation undertaken in April and May 2025. The paper on “Authoritative data for crises” (Part II) is a continuation of the paper of the initial paper on endorsed at the thirteenth session of the Committee of Experts, “Authoritative data in an evolving geospatial landscape: an exploration of policy and legal challenges” (Part I). The paper 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 Part I. As crises progress through stages from pre-crisis to acute and into post-crisis, timely access to information is critical to facilitate rapid response to crisis situations. This requires sound and robust policies, legislations and regulations grounded in enabling policy and legal environment.

13. The paper supports data users and producers in identifying and mitigating potential trade-offs that can arise when responding to a crisis, outlining related policy and legal

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

<sup>2</sup> Centre for Space Law and Policy, EuroGeographics, Geospatial Framework, International Bar Association, International Hydrographic Organization and Open Geospatial Consortium.

<sup>3</sup> Academic Network and Private Sector Network.

considerations for Member States. It highlights that enabling governance systems, including robust policy, legal frameworks and institutional arrangements are necessary preconditions for trust in authoritative data for crisis response. Finally, the paper offers guidance for data users and providers to identify gaps in governance regarding authoritative data in crisis applications to promote transparency and mitigate trade-offs in essential data characteristics.

14. In addressing this goal, the paper continues to draw from the “control-trust continuum” presented in the earlier paper and kept as a core principle for global geospatial information management, in the context of policy and legal frameworks. The continuum illustrates 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 builds on this work with a particular focus on crisis and disaster response 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.

15. As discussed during the fourteenth session, the paper is aimed at preparing Member States for crisis situations, leveraging existing products of the working group and of the Committee of Experts. The paper's scope was shaped through feedback from working group members, and from Member States and experts provided during the global consultation process. The paper underwent a global consultation with Member States and other relevant stakeholders from 15 April 2025 to 12 May 2025. During this period, the working group received a total of 22 feedback submissions from Member States, organizations, and UN system entities with a positive reception and no significant recommended changes to the scope or structure. The recommendations were integrated into a final draft, which is presented to the Committee for endorsement.

16. Several key changes were made to the paper to reflect feedback received during the global consultation. General modifications included a change to the paper title (from “Authoritative geospatial data for crises” to “Authoritative data for crises”), improvements to formatting and readability using visual tools, acknowledgement throughout the paper of the influence of different legal, policy, political, and socioeconomic realities of Member States, and the addition of examples highlighting marginalized populations’ disproportionate risks faced during a crisis.

17. In addition, through the global consultation, real-world examples were added in Part I of the paper “Authoritative data for crises” to illustrate trade-offs in data characteristics, and to highlight equity considerations related to data quality. In Part II of the paper, the readability was improved using callout boxes to clarify complex legal concepts, in addition to a list of types of policies to facilitate data access during a crisis. In Part III of the paper, two new case studies were added to increase the paper’s diversity and scope. In Part IV of the paper, additional practical guidance for producers and users was included, and the control vs. trust continuum’s practical utility for governments was outlined.

18. Some of the comments received during the global consultation, while relevant to the mandate of the working group on Policy and Legal frameworks for geospatial information management, were ultimately determined to be out of scope for this document. Drawing from the feedback, future activities of the working group may explore policy and legal tools for addressing biases in datasets (e.g., underrepresentation of rural or Indigenous areas) harnessed for crisis response, inclusive governance approaches with specific recommendations for protecting marginalized groups’ data rights and access, and policy and legal implications of using AI and machine learning to address trade-offs in data characteristics during a crisis.

#### **IV. The paper on “Data for public good in the digital world”**

19. In September 2024, following the adoption at the General Assembly of the [Pact for the Future](#) and its annexes: the [Global Digital Compact](#) and [Declaration on Future Generations](#), the working group adjusted its existing concept paper on “Geospatial data for public good” to provide stronger ties between geospatial information management, the Global Digital Compact, and progress towards the SDGs. The updated paper on “Data for public good in the digital world,” is provided as a background document to this report, and is being presented to the Committee for consideration and discussion.

20. The initial concept paper presented in 2024 discussed different approaches to geospatial data for the public good, including risk-based, rights-based, and market-based approaches. The rights-based approach considered 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 emphasized 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 revolution to address current global challenges. The risk-based approach focused on the apprehension of harm to human beings and/or the environment. The approach consisted of assessing levels of risk and recommending mitigating measures accordingly. The working group focused on the risk-based approach in the initial concept paper to frame the public good, as it provides a multi-dimensional approach.

21. These three fundamental approaches, as well as the foundational concept of the “trust-control continuum,” introduced in the paper “Authoritative data in an evolving geospatial landscape: an exploration of policy and legal challenges,” are kept as key themes underpinning the updated paper.

22. In the current context of extreme climate variability and transformation, the working group still highlights the importance of a risk-based approach to decision-making on geospatial information management, as it can inform both rights- and market-based approaches, help identify appropriate policy, legal and governance instruments, and support the overall SDGs - a universal call for action to end poverty, protect the planet, and ensure that by 2030, all people enjoy peace and prosperity. This approach is also rooted in the [Pact for the Future](#) and its annexes, which aim to ensure that digital technologies contribute to sustainable development and human rights, while addressing risks such as the digital divide, cybersecurity, and misuse of technology. There are nuances, however, depending on which SDGs or priority is being considered, and as with the initial paper, Member States are encouraged to adapt their approach(es) on a case-by-case basis, depending on their national context, while working to implement the SDGs in an increasingly digital world.

#### **V. Policy and legal considerations related to emerging technologies and AI**

23. To address decision [14/112](#) on continuing “to analyze the complex policy and legal issues,” the working group is providing a concept paper on “Addressing potential Implications to the Geospatial Sector on developing Legal and Regulatory Framework on AI,” which highlights the need for a strategic framework to ensure that emerging AI legal and regulatory frameworks adequately incorporate the unique requirements of the geospatial sector. The concept paper identifies priority actions, such as mapping existing regulations, analyzing the impact on geospatial use cases, facilitating stakeholder consultation, and promoting proactive engagement with policymakers and developing capacity for compliance and adaptation.

24. A “Rallying statement to the Geospatial Sector on the Development of a Legal and Regulatory Framework for AI” is also provided as background document and emphasizes the urgency of establishing clear, ethical, and comprehensive AI regulations for the

geospatial sector, calling for collective action to promote transparency, safeguard human rights, and maximize the potential of geospatial AI innovation. The statement is accompanied by a compendium report on “International Regulations on AI in Geospatial Applications” showcasing the evolving regulatory landscape, summarizing developments across regions and supporting informed decision-making and regulatory coherence among Member States.

25. In line with decision 14/112, the working group is also addressing other emerging technologies with implications for policy and legal frameworks for global geospatial information management, and as such started to consider and examine policy and legal considerations related to automated navigation and high-definition (HD) maps in transportation and geospatial information management, further detailed in the Work plan 2025-2027.

## VI. Work plan 2025-2027

26. During the intersessional period, the working group also updated its Work plan to adapt to new challenges and opportunities for policy and legal frameworks for global geospatial information management, pursuant to decision 14/112 of the Committee. The Work plan 2025-2027 builds on the progress of the working group to date, particularly in the areas of authoritative, fit-for-purpose data, and data for the public good. The Work plan also positions the activities of the working group to provide to the Committee with information and advice on the impact of emerging technologies and trends on geospatial information management, including artificial intelligence and machine learning, and other policy and legal considerations in the rapidly evolving geospatial landscape and in the broader context of digital transformation.

27. For the period covered by the Work plan 2025-2027, the goals and objectives of the Working Group are to:

- (a) Address policy and legal considerations for global geospatial information management that respond to evolving needs, societal progress and emerging technologies; notably, highlighting key policy and legal considerations related to AI and geospatial information.
- (b) Continue to provide relevant expertise and support to the Committee of Experts in the development of norms, principles and guidelines, sustaining and developing policy and legal capacity to respond to the needs of Member States and its functional groups.
- (c) Continue to engage and communicate the value of sound, robust policy and legal frameworks for geospatial information management, among and with relevant stakeholders and partners.

28. In the Work plan 2025-2027, the working group also proposes a new project to examine automated navigation and high-definition (HD) maps in transportation and geospatial information management. The project aims to synthesize HD map knowledge, explain how these technologies might improve automated navigation safety, and the technical and institutional challenges of implementing HD maps at scale. The topic will address key questions including: What role should governments play in the stewardship of HD Maps? How do HD Maps affect public safety, privacy, liability, and interoperability? and, what governance models can ensure both innovation and public accountability? Updates, insights and relevant papers will be prepared and submitted to the Committee of Experts, as appropriate in the coming sessions.

29. The Work plan 2025-2027 is included as a background document to the report and for further considerations, discussions and guidance by the Committee of Experts.



## **VII. Final considerations and summary**

30. 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 towards sound and robust policy and legal frameworks for achieving the 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 deliverables and background documents reflect the objective. The working group encourages Members to consider these background documents, including the rallying statement on AI in geospatial, and to take action that responds to the needs of their own national contexts.

31. The working group will continue to advance with the implementation of its Work plan 2025-2027, including through the development of partnerships and collaboration both within and beyond the geospatial community, to ensure a coordinated path forward on policy and legal frameworks for the global geospatial information ecosystem. The working group will continue to advance its objectives and considerations including on emerging technologies and trends on geospatial information management, including artificial intelligence and machine learning, through virtual meetings and at its third in-person meeting in Riyadh, Saudi Arabia, on 7-9 October 2025.

## **VIII. Points for discussion**

32. 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 address complex policy and legal issues related to emerging technologies and trends on geospatial information management, including artificial intelligence, and related to real-world situations.

(b) Consider and endorse the paper on "Authoritative data for crises," following its successful global consultation, in order to provide authoritative guidance to Member States and Observers on the use of geospatial data during a disaster.

(c) Take note of the updated paper on "Data for public good in the digital world" and consider its potential applications as appropriate for geospatial information management and sustainable development.

(d) Endorse the rallying statement to encourage global action to develop policy and legal frameworks that address the unique challenges and opportunities of geospatial AI and take note of the development of the compendium on "International Regulations on AI in Geospatial Applications".

(e) Take note of the present report and express its views on the efforts to provide policy and legal considerations in the field of AI, including through the background document and the concept paper on "Addressing the Implications of the Developing Legal and Regulatory Framework on AI for the Geospatial Sector".

(f) Take note of, express its views, and provide guidance on the proposed Work plan 2025-2027.

(g) Take note of the third in-person meeting of the working group on policy and legal framework for geospatial information management to be held in Riyadh, Saudi Arabia, on 7-9 October 2025, in accordance with decision 14/111 of the Committee of Experts.