Geospatial information for climate, environment, and resilience
Perspectives from the Working Group on Policy and Legal Frameworks

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Authoritative data for crises: Introduction

- **Before, during and in the aftermath** of a crisis, **timely access** to authoritative fit-for-purpose geospatial data is critical for coordinating an effective response.

- Reliable access to geospatial data throughout these crisis phases is enabled by **targeted legislation, regulation and policies** situated within a robust national **policy and legal framework**.

- When responding to a crisis response, **trade-offs** may arise as priorities are realigned to reflect the **urgent** need for **timely and available data**, particularly in jurisdictions lacking enabling laws and policies.

    - Characteristics that make data fit for purpose can shift as a crisis evolves from one phase to the next.

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Introduction (2)

- This discussion builds on a previous 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".***

- The paper, consulted globally and presented to the Committee for endorsement at the fifteenth session, explores the **pre-conditions for trust** of authoritative, fit for purpose data used during **crises**, which involves the development of robust policy and legal frameworks and institutional arrangements in the pre-crisis phase.

- In order to establish trust, government authorities are encouraged to implement legal and policy tools and institutional arrangements **to enable transparent access to fit for purpose data** needed for **effective crisis response.**

CONTROL ←————————————————————→ TRUST

Tightly controlled or formally codified instruments developed with government involvement or oversight

Less formalized or voluntary initiatives with greater involvement or oversight by private and non-profit entities
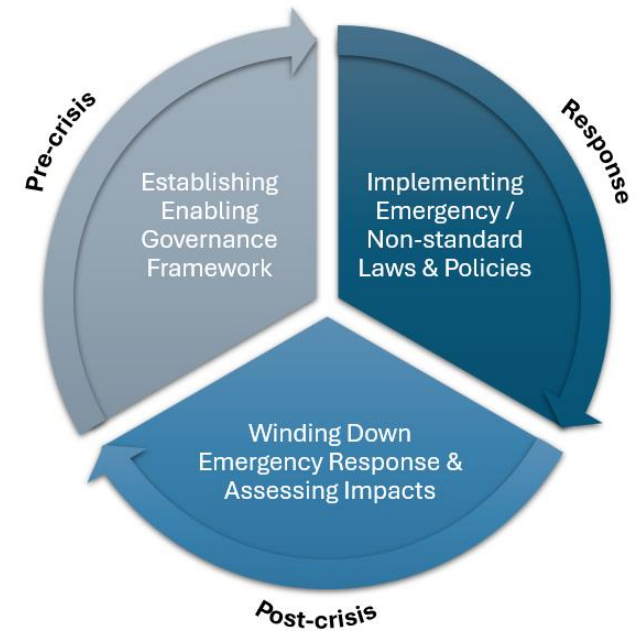
The "control vs. trust continuum".

Part I: Exploring Trade-offs During the Response Phase

- **Crisis scenarios** often give rise to a need to redefine or **reprioritize traits ("characteristics")** used to designate data as **authoritative**.

- During a crisis, authoritative data must above all be easily **accessible and reliable**, capable of supporting **real-time decision-making**, and **adaptable** to various scales and scenarios.

  - Having access to data with these characteristics ensures data users (including responders) can effectively analyze the situation, plan interventions, and manage resources in a timely and informed manner.

- When data **accessibility** and **timeliness** become the preeminent considerations, users may need to adjust criteria used to identify data as authoritative or fit for purpose.

- Prioritizing accessibility and timeliness may involve compromises in other data characteristics or principles, such as **quality** or **privacy and security**.

Part II: Minimizing Trade-offs: Laws, Policies, Institutional Arrangements (1)

- **Pre-crisis**, law and policymakers have the opportunity to establish robust governance frameworks, including enabling policy and legal tools and institutional arrangements, in preparation for worst-case scenarios.

  - Establishing robust governance frameworks before they are needed can help to **minimize trade-offs** in data characteristics when a crisis arises.

  - A "robust" governance framework includes provisions for **intellectual property**, **data privacy and security**, **liability**, **legal interoperability, licensing**, **data quality** and **equity**.

- In the **response phase**, these pre-established enabling legal and policy tools and institutional arrangements are "put to work", facilitating access to fit-for-purpose data in real time.

  - During this phase, it may be necessary to implement **limited and targeted emergency** or **non-standard** laws and policies to expedite data sharing and access.

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Part II: Minimizing Trade-offs: Laws, Policies, Institutional Arrangements (2)

▪ **Post-crisis**, extraordinary legal and policy measures introduced to facilitate an effective response involving trade-offs in data characteristics should be reversed, with steps taken to **restore the rule of law to baseline "pre-crisis"** status where necessary.

  ▪ Policy makers can also conduct **impact assessments** of the response efforts. This can include an appraisal of **impacts to humans, resources and infrastructure**, with **demographic data** providing insight into response outcomes for the broader population as well as for marginalized groups.

  ▪ There is also an opportunity to observe which types of laws and policies produced an **enabling versus hindering effect** on facilitating **timely data access** and initiate any necessary adjustments.
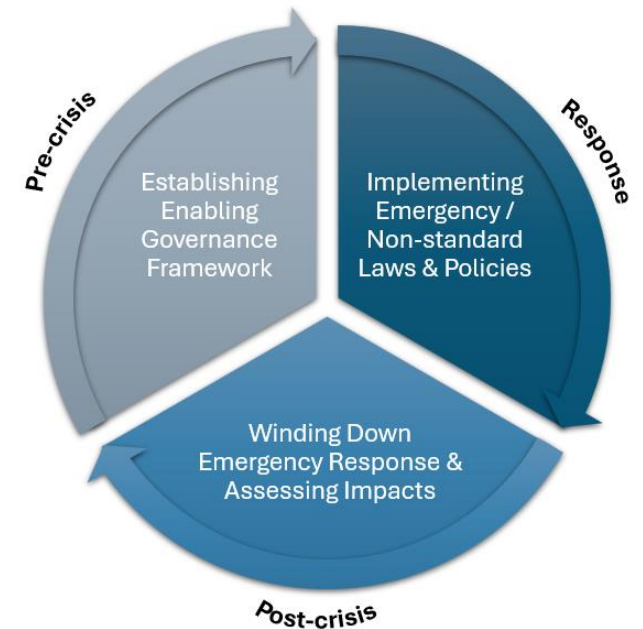
Part III: Exploring User And Producer Perspectives Through Case Studies

Part III includes 6 **case studies** of **policy and legal instruments** or **institutional arrangements** that facilitate timely data access in a crisis, highlighting the distinctive data producer and user roles.

➢ **International Charter: Space and Major Disasters**

➢ **Association of Southeast Asian Nations (ASEAN) Leaders' Declaration on Disaster Health Management**

➢ **Humanitarian Data Exchange (HDX)**

➢ **Flood Mapping in Canada**

➢ **Caribbean Disaster Emergency Management Agency (CDEMA)**

➢ **Missing Maps Project: Doctors Without Borders Collaboration**

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Part IV: Guidance For Decision Makers, Providers and Users (1)

Pre-crisis	
Data Sources & Providers	✓ Have potential sources and providers of authoritative data during a crisis been identified?
Data Characteristics	✓ Have data characteristics that make the data fit for the purpose of responding to a crisis been identified?

Legal & Policy Considerations	✓ How do existing laws define / affect the following concepts?
	   • Data privacy & security
	   • Intellectual property
	   • Licensing & legal interoperability
	   • Liability
	   • Demographic data

Institutional Arrangements	✓ Which of the following have been or could be established to facilitate timely sharing of fit-for-purpose data during a crisis?
	   • Collaborative partnerships (inter-agency organization
	   • International standards collaboration
	   • Validation Frameworks for VGI sources

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Part IV: Guidance For Decision Makers, Providers and Users (2)

Response	
Considerations for Users	✓ Are available fit for purpose data sources being successfully harnessed? ✓ If critical data gaps emerge in real-time, are steps being taken to minimize trade-offs in data characteristics when seeking alternate data sources?
Considerations for Providers	✓ Where applicable, are providers adhering to agreed upon terms for providing data that is timely, up-to-date, and adheres to established quality standards?

Post-crisis	
Winding Down Emergency Measures	✓ Have rights, privileges or protections that were temporarily suspended to facilitate data access during crisis response been restored? • E.g., If security and privacy protections were temporarily loosened to enable access to critical data under emergency conditions, have these measures since been restored?
Reviewing Lessons Learned	✓ Did data providers and users adhere to applicable laws, regulations and policies in their handling of critical authoritative data harnessed for crisis response? ✓ Did responders make any trade-offs in data characteristics during the response phase due to data availability/timeliness? If so, what was the nature of these trade-offs, and how can they be avoided or mitigated in future crises?

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Part IV: Additional Considerations for Providers and Users (3)

Can the data be harnessed for crisis response applications?

- ✓ Is the data sensitive?
    - ✓ If so, do laws and/or policies limit the sharing of this data?
- ✓ Is the dataset limited in any way that could hinder its effective use for crisis response?
    - ✓ If so, are these flaws clearly noted in the metadata? E.g., accuracy, completeness
    - ✓ Are the limitations described in clear, non-technical language?
- ✓ Are you authorized to share the data?
    - ✓ Is the data licensed?
    - ✓ If so, are you able to locate the licensing terms in the metadata?
    - ✓ Do the licensing terms impose limits on your sharing of the data with crisis responders?

Thank you

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Key Messages

- **Overview**: The evolving landscape of geospatial information, driven by technological and global changes, requires continuous updates to legal and regulatory frameworks to effectively manage and leverage these advancements.

- The WG supports Member States in achieving resilience and sustainability through robust policy and legal frameworks.

- **Key resources:**
  - **Policy & Legal Resource Kit:** Promotes data sharing and improves geospatial information management.
  - **Compendium on Licensing:** Establishes best practices for geospatial data licensing.

- **Recent Activities of Note:**
  - **Paper on 'Authoritative, fit-for-purpose geospatial data for crises':** Focus on fit-for-purpose data for crises, enhancing resilience during and post-crisis.
  - **Post-Crisis Considerations:** Capacity building, real-time data integration, and trust in emerging technologies.

- **Alignment with UN-IGIF:**
  - **Strategic Pathway 2:** Supports country-level action plans and IGIF implementation for sustainable development.