4th Plenary of UN-GGIM: Europe

UN-GGIM: Strengthening the Global Data Ecosystem

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REQUIRES COURAGE TO COMMIT
STRENGTH IS IN THE IMPLEMENTATION

Strengthening the Global Data Ecosystem

ECOSOC Resolution 2016/27

- Acknowledged the considerable achievements and progress made by the Committee of Experts in the area of global geospatial information management, its contribution to the strengthening of geospatial information management capacities and utilization in developing countries, and recognized the relevance of geospatial information for the various United Nations policy agendas.

- Stressed the need to strengthen the coordination and coherence of global geospatial information management, in capacity-building, norm-setting, data collection, dissemination and sharing, among others, through appropriate coordination mechanisms, including in the broader United Nations system, building on the work of the Committee.

- Item on the Council's agenda changed from 'Cartography' to 'Geospatial information, and *invited the Committee to report on all matters relating to geography, geospatial information and related topics; and to report back to the Council within five years on the implementation of the present resolution*.

Digital Evolution

Digital Earth

Digital Transformation

Global Data Ecosystem

Digital Maturity

Digital Divide

Implementing Nationally Integrated Information Systems
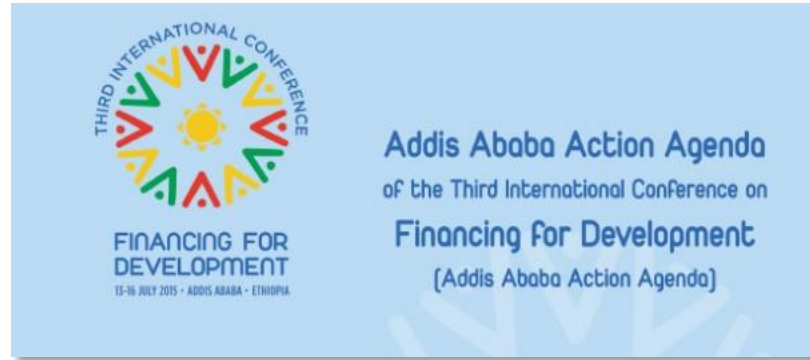
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Global development policy framework
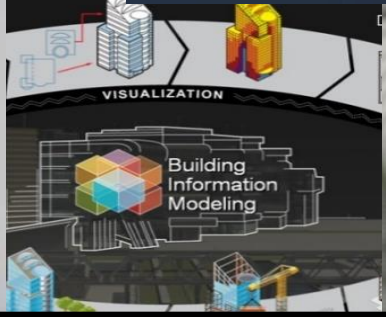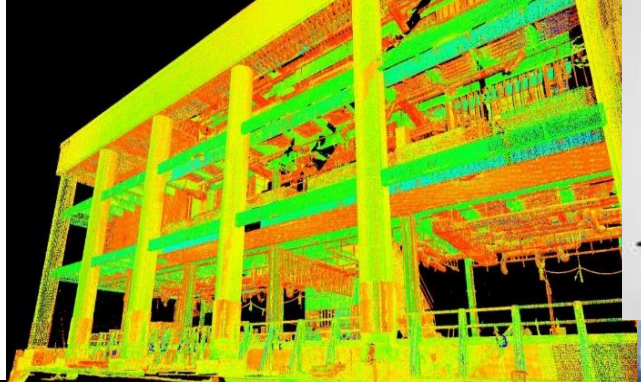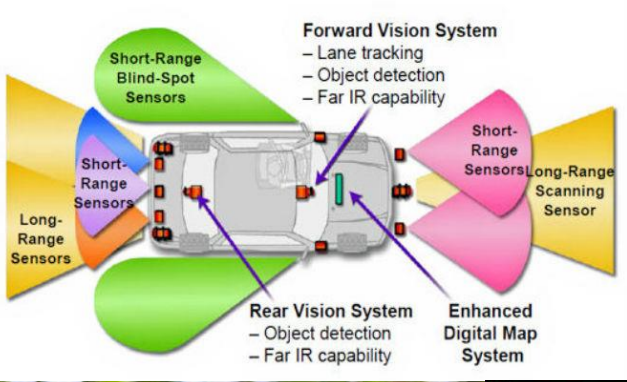
Technology and society are driving digital transformation, but are we yet leveraging this new '*data ecosystem*' effectively?
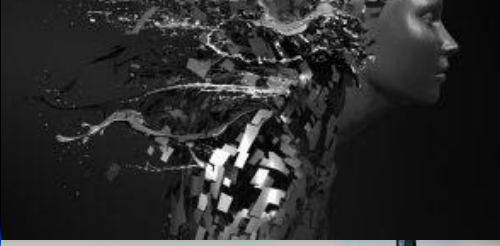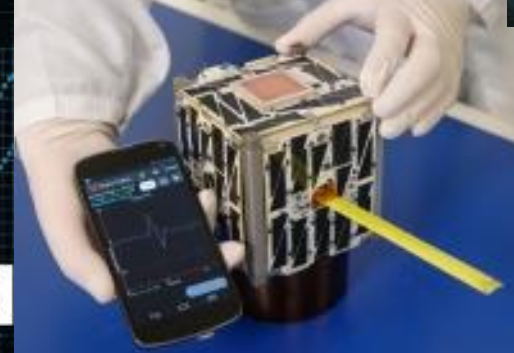
Do we really understand the scale of the problems, where they are, whom they impact, what are the causes, and how they can be remedied?

Do we have the data for development??
Can we make it 'production ready' information for all?

GLOBAL DEVELOPMENT POLICY FRAMEWORK

The 2030 Agenda for Sustainable Development	Sendai Framework for Disaster Risk Reduction 2015-2030	SIDS Accelerated Modalities of Action (SAMOA) Pathway	Paris Agreement on Climate Change	HABITAT III Urban Agenda

How does Digital Transformation   **enable the 'data ecosystem'**   **to achieve Sustainable Development?**

How do we bridge the Digital Divide?

2030 Agenda: Goals, targets, indicators

17
SDGs

169 Targets

232 global indicators
to follow-up and review
progress

Implementation via national
planning processes, policies,
strategies and frameworks

Measuring and monitoring: Statistics,
geospatial information, Earth
observations and other Big Data

Addressing the data needs for the 2030 Agenda

Need to include all parts of the statistical system and new data sources

Need for quality, accessible, timely and reliable disaggregated data

Data on a wide range of topics; unprecedented amount of data

Interoperability and integration of systems is crucial to harnessing the potential of all types of data

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Addressing the data needs for the 2030 Agenda

- The scope of the 2030 Agenda requires high-quality and disaggregated data that are timely, open, accessible, understandable and easy to use for a large range of users, including for decision making at all levels.

- There is a need for a reporting system on the SDGs that would have benefit from the sub-national (local) to the national level; and allow for global reporting that builds directly on the data shared by countries.

- Important to create an opportunity for countries to directly contribute to the global reporting. While the challenges are immense, the digital technology that is available today allows the necessary transformation.

- An aspiration is to strengthen countries' national geospatial and statistical information systems to facilitate and enable a '*data ecosystem*' that leverages an accessible, integrative and interoperable local to global system-of-systems.

Strengthening the Global Data Ecosystem

UN-GGIM: 2011-2016 – Develop the global understanding of geospatial information

UN-GGIM: 2017-2021 – Coordination, coherence and implementation

- Facilitate the strengthening and normative capacity building of global geospatial information management in support of the implementation of the 2030 Agenda.

- Efforts include promoting the use of geospatial information systems and services for modern mapping; methodological development; national and regional capacity-building; standards-setting; data collection, dissemination and sharing; and better integration of geospatial and statistical information systems for Member States.

- Regional Commissions provide relevant support, upon request and as appropriate, to the work of the regional committees of UN-GGIM, and that the outcomes and benefits of the activities be equally disseminated to all Member States in each region.

Strengthening the Global Data Ecosystem

UN-GGIM: 2017-2021 – Coordination, coherence and implementation

1. Maturity: Moving from "GGIM 1.0 to GGIM 2.0" – determining our value proposition to ECOSOC in the next 2-3 year horizon.

2. Strategy and roadmap on the ECOSOC resolution and how we implement the new and strengthened mandate.

3. A new Strategic Plan for UN-GGIM that considers 2020 and beyond in 5 year time steps.

4. Raising more awareness, including political, of UN-GGIM and connecting the political - technical levels within Member States.

5. Connecting more to the activities of the regional committees, Regional Commissions, and relevant statistical bodies.

6. Ensuring effective coordination and linkages across global/regional Expert & Working Groups.

7. Seek extra-budgetary and funding options, including ways of implementation.

8. More capacity development for countries in next 5 years – developing guides, standards, methods and norms.

Strengthening the Global Data Ecosystem

UN-GGIM

2017-2021 Strategic Framework

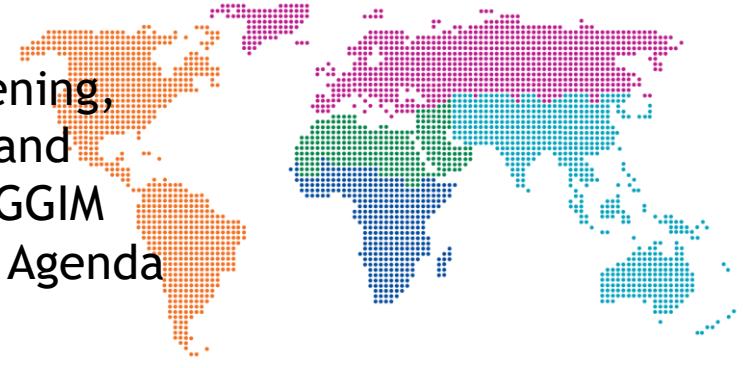| CONTEXT	VISION	*Positioning geospatial information to address global challenges*				
	MISSION	*Operating within agreed policies and institutional arrangements, and as an interconnected global community of practice, the Committee of Experts will ensure that geospatial information and resources are coordinated, maintained, accessible, and able to be used effectively and efficiently by Member States and society to address key global challenges in a timely manner*				
	MANDATED STRATEGIC OBJECTIVES	Provide leadership in setting the agenda for the development of global geospatial information and to promote its use to address key global challenges	Provide a forum for coordination and dialogue with and among Member States and relevant international organizations on enhanced cooperation	Provide a platform for the development of effective strategies to build and strengthen national capacity and capability concerning geospatial information, especially in developing countries	Propose work-plans, frameworks and guidelines to promote common principles, policies, methods, standards and mechanisms for the interoperability and use of geospatial data and services	Make joint decisions and set the direction for the production and use of geospatial information within and across national, regional and global policy frameworks

	GLOBAL POLICY FRAMEWORK	Transforming our World: The 2030 Agenda for Sustainable Development				
REQUIREMENTS		Sendai Framework for Disaster Risk Reduction 2015-2030	SIDS Accelerated Modalities of Action (SAMOA) Pathway	Addis Ababa Action Agenda	Paris Agreement on Climate Change	HABITAT III Urban Agenda
	GEOSPATIAL CHALLENGES & DRIVERS	Environmental management Disaster management Sustainable development Population Urban planning Humanitarian assistance Food security Education National security Land management Climate change Water scarcity Oceans & marine Institutional governance Legal & policy Health & welfare Poverty reduction Sustainable cities Socio-economic metrics				
	DIRECT NATIONAL BENEFITS & EFFICIENCIES	• Reduced duplication of effort in the capture, management, and delivery of fundamental geospatial information • Authoritative, reliable and maintained geospatial data available nationally, regionally, and globally • Increased return on investment through better coordination, use and reuse of data, information and systems • Better evidence-based decision making, supported by good data, science and policy • More open, accountable, responsive and efficient governments • Presentation and delivery of timely and 'fit for purpose' data in times of need • Increased collaboration and integration of national data and information systems across all levels of government • Best practices and use cases for enriching national processes on geospatial information management				
	OPERATING PRINCIPLES	Sound Nat. Policies, Legal Frameworks & Institutional Arrangements	Provision of Fundamental Authoritative Data and Information	Agreed Standards, Methods, Guides and Frameworks	Principles on Geospatial Information and Open Data	Integration and Interoperability of National Information Systems	Information Sharing and Knowledge Transfer	Building Local to Global Capacity & Capability
DELIVERABLES	**WORKING ACTIVITIES AND OUTPUTS**	• Geospatial Information for Sustainable Development: 2030 Agenda, Sendai Framework, etc. • Integration of Geospatial & Statistical Information: Implement the Global Statistical Geospatial Framework • Geospatial Information and Services for Disasters: Implement Strategic Framework • Global Geodetic Reference Frame: Roadmap to Implement • Determination of global fundamental data themes • Marine geospatial information • Land administration and management • Legal and policy frameworks • National institutional arrangements • Implementation and adoption of standards for the global geospatial information community • National geospatial data and information systems				

Frameworks, guides, norms, standards and methodological development

Normative strengthening, capacity building and implementation of GGIM in support of the 2030 Agenda

UN-GGIM: Strengthening the Global Data Ecosystem

The activities and efforts that contribute to the unique local-to-global value of UN-GGIM for Member States

- Strengthening global geospatial information management
- Contribution of regional committees, thematic groups and networks
- Legal and policy frameworks and issues related to authoritative data
- Trends in national institutional arrangements
- Adoption of standards and technical specifications
- Strengthening collaboration with UNGEGN
- United Nations activities in geospatial information management
- Secretariat programme management

- Global geodetic reference frame
- Global fundamental geospatial data themes
- Integration of geospatial, statistical and other information
- Geospatial information and services for disasters
- Land administration and management
- Geospatial information for sustainable development
- National geospatial data and information systems
- Marine geospatial information

Strengthening the Global Data Ecosystem

Strengthening global geospatial information management

- Strategic Framework is presented as a starting point for discussion towards a strategic plan and road map that will enable the Committee to be better supported by the regional committee architecture and the Regional Commissions.

- Continue to work on global policies for geospatial information management in tandem with producing tangible outputs such as norms, handbooks, methodologies, standards and guidelines.

- Need for closer synergies with the activities of the regional committees and working groups, Regional Commissions, and relevant statistical bodies.

- Substantively improve and strengthen the national geospatial information management capacities of developing countries towards implementing the 2030 Agenda and other global policies.

Strengthening the Global Data Ecosystem

National geospatial data and information systems

- Effort by UNSD and the World Bank to explore and develop possible mechanisms for geospatial data, infrastructure and policies to be embedded more holistically within concessional financing, technical assistance and knowledge-sharing services and their subsequent implementation in developing countries.

- Recognizes the need for collaboration in developing an overarching geospatial framework that countries could reference when using geospatial information to develop national systems tailored to their own situations.

- The framework would include an action plan and road map on means for implementation, as well as elements such as the economic impact and value of geospatial information systems, investment needs and associated principles, tools, guides and good practices.

An integrative data ecosystem

The Sustainable Development Goals Report 2016

Pyramid diagram:

17 Goals

169 Targets

232 Global Indicators

Global Outputs and Reporting

Official Aggregation and Integration into Indicator Framework by National Statistical Offices. Captures data integrity and validation.

SDG metrics for measuring and monitoring progress. Data compiled and disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location, etc.

National Sustainable Development Indicators

Earth Observations and Monitoring	National Spatial Data Infrastructure	National Statistics, Accounts, Administrative Registers, Demographics	Other Sources of Data, incl. Big Data
Imagery Water/Ocean Land use/cover Observations In situ monitoring Air/Pollution Ecosystems Forest/Agriculture Climate	Geodetic positioning Elevation Topography Land use & cover Transport/Infrastruct. Cadastre/Parcels Water & Oceans Cities & Settlements Administrative Bdys.	Population Demographics Poverty Trade/Business Environment Labour/Economics Agriculture Disability/Gender Civil Registration & Vital Stats.	Mobile phone Social media Sensors Automated devices Satellite imagery VGI Crowd sourcing ??

National Information Systems

Data Inputs

Fundamental baseline data and new data sources

Local to national social, economic and environmental conditions and circumstances

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The fact is that no species has ever had such wholesale control over everything on earth, living or dead, as we now have. That lays upon us, whether we like it or not, an awesome responsibility. In our hands now lies not only our own future, but that of all other living creatures with whom we share the earth.

David Attenborough

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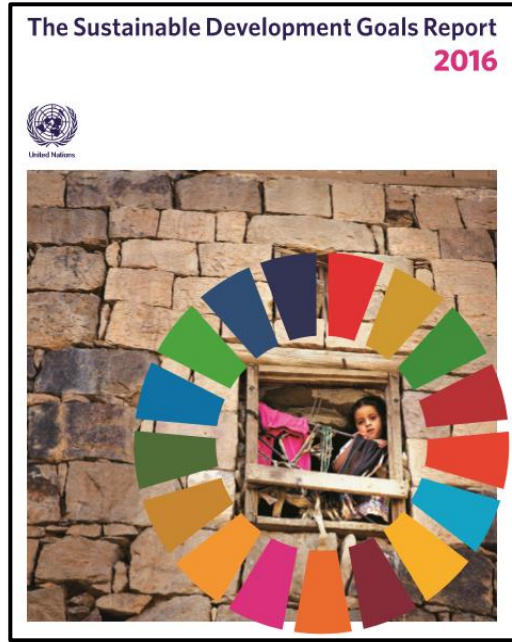*Positioning geospatial information to address global challenges*

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Geospatial Information Services to Support Emergency Response:

Current situation (fact finding analysis) and way forward (strategic framework)

Kyoung-Soo Eom

Chief UN Geospatial Information Section
(former UN Cartographic Section)
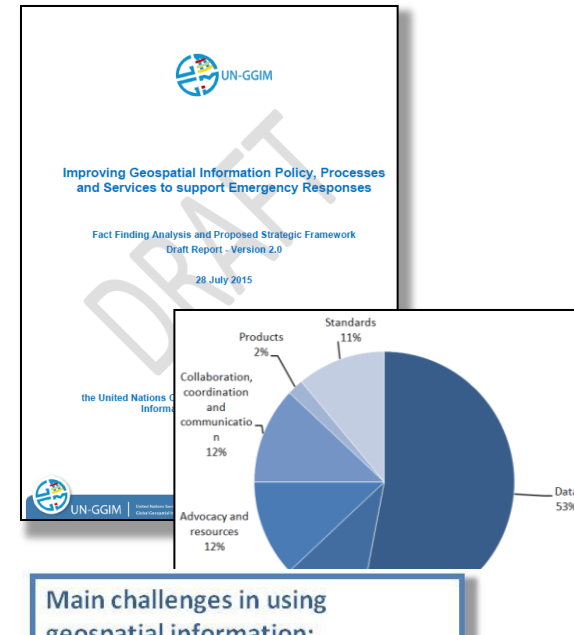**UN-GGIM Secretariat**

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Fact finding analysis

- Allowed identifying not only the **challenges** and **bottlenecks** encountered by stakeholders and partners during recent crisis but also the **major success factors** and **opportunities** to address them;

- These finding got crystallized into a **proposed strategic framework** which, if implemented, would allow for the necessary geospatial information and services to be **available**, of **quality** and **accessible** in a **coordinated way** to decision making and operations during disasters.

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Improving Geospatial Information Policy, Processes and Services to support Emergency Responses

Fact Finding Analysis and Proposed Strategic Framework
Draft Report - Version 2.0

28 July 2015

the United Nations Information

UN-GGIM

DRAFT

Standards 11%

Products 2%

Collaboration, coordination and communication 12%

Advocacy and resources 12%

Data 53%

Main challenges in using geospatial information:

63% Conflicting or contradicting datasets

55% Metadata is not available

51% Data of poor quality

40% of the agencies think that the international community involved in the response **did not leverage enough** their existing geospatial information and/or technical capacities.

Proposed strategic framework and flowcharts

Purpose
To prevent and reduce the human and economic impact of disasters

Vision
The necessary geospatial information and geospatial information services are available, of quality and accessible in a coordinated way to decision making and operations during disasters
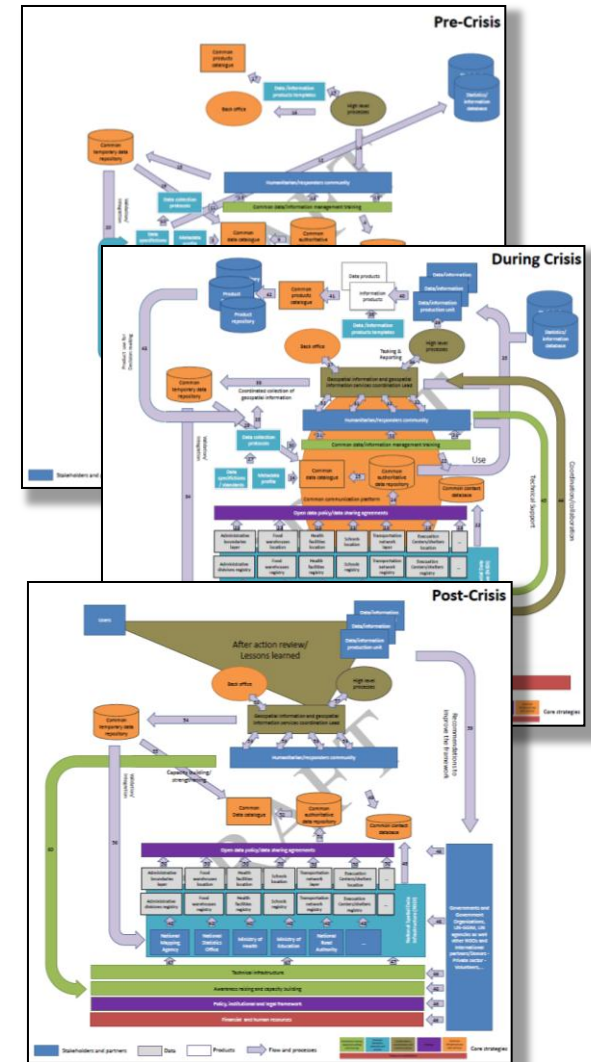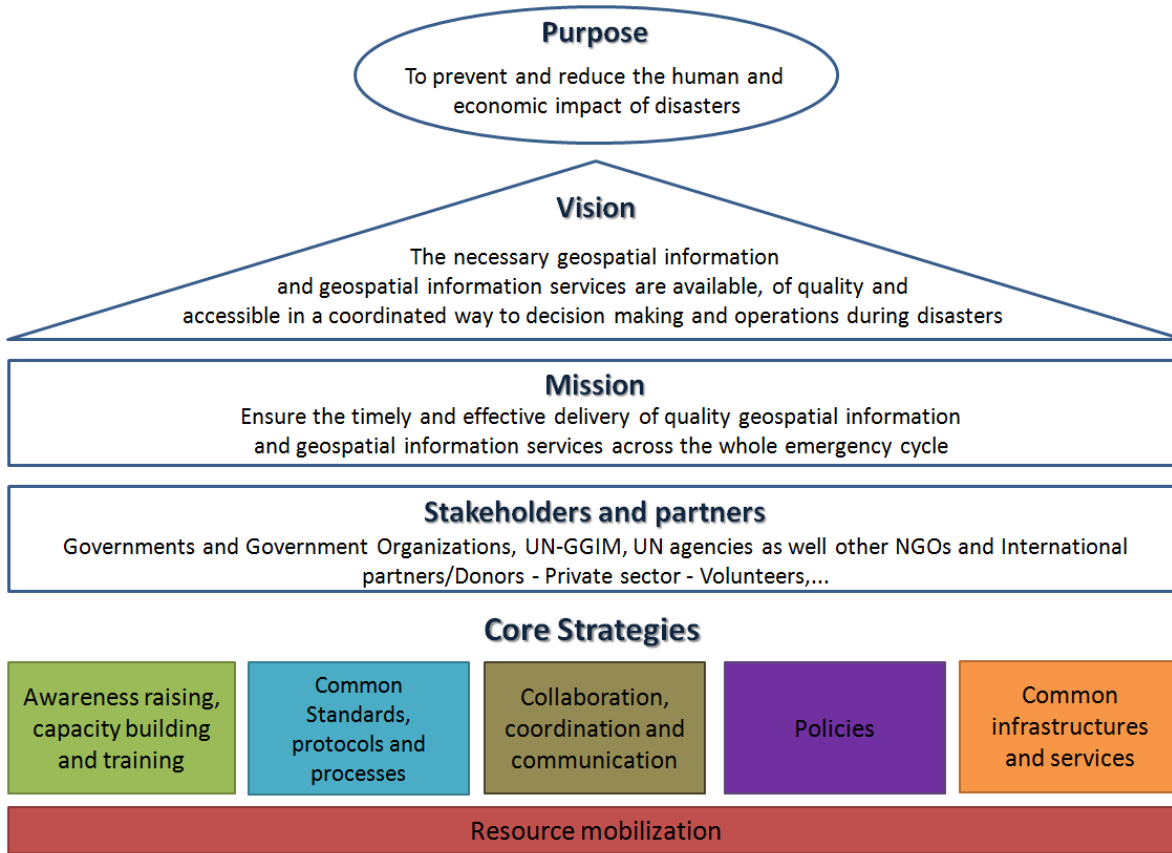
Mission
Ensure the timely and effective delivery of quality geospatial information and geospatial information services across the whole emergency cycle

Stakeholders and partners
Governments and Government Organizations, UN-GGIM, UN agencies as well other NGOs and International partners/Donors - Private sector - Volunteers,...

Core Strategies

Awareness raising, capacity building and training	Common Standards, protocols and processes	Collaboration, coordination and communication	Policies	Common infrastructures and services

Resource mobilization

Pre-Crisis

During Crisis

Post-Crisis

Side Event (3 August 2015)

- **55 participants;**
- **25 countries;**
- **4 presentations**

The discussions that followed highlight the importance of:
- **Getting all the lead players** to agree on their respective roles and mandate regarding geospatial information and services during disasters;
- **Conducting drills** involving all the players prior to disasters;
- Looking at the **bigger picture** to ensure UN-GGIM does assist existing processes

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Other references to Disasters

Disaster Risk Reduction and/or **Disaster management** have been discussed and mentioned during several sessions including, but not limited to:

- The 22nd meeting of the **ISCGM** and led to resolution emphasizing how National Geospatial Information Authorities (NGIA) can contribute to Disaster Risk Reduction;

- The session on **Activities related to SD & Post 2015** where the link with the Sendai Framework and the geospatial role have been highlighted.

  ➡ Topic that federates, goes across sectors and talks to decision makers
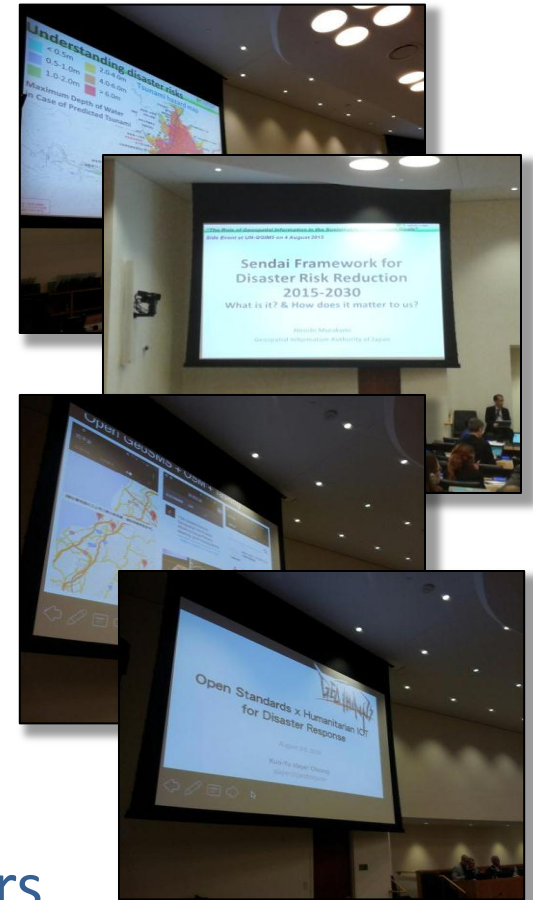
UN-GGIM contribution

The **UN-GGIM, through its mandate**, is well placed to contribute to several of the core strategies included in the framework, and this starting with:

- **Raising the awareness of Member States** on the importance of data preparedness, National Spatial Data Infrastructure (NSDI) and open data policies;
- **Developing and promoting common standards, protocols and processes** aiming at improving data quality and data interoperability at the global level;
- **Developing and implementing policies** aiming at improving the availability, quality and accessibility of geospatial information and services.

Recommendations

For the UN-GGIM Committee to:

- Consider including **geospatial information and services in disasters** as a **formal UN-GGIM agenda item**;

- Establish a **Working Group on geospatial information and services in disasters** within UN-GGIM with the main objective to develop a **policy framework** to be presented to **ECOSOC** and the **General Assembly** for consideration;

- **Advocate** for **humanitarian** and **response community** to review the framework as a way to improve geospatial information and services to support disaster response.

Thank you for your kind attention!