

GEOSPATIAL INFORMATION FOR SUSTAINABLE DEVELOPMENT AND RESILIENCE

14th Session of UN-GGIM

Monday 5 August 2024
03:00pm to 4:15pm EDT/UTC-5
ggim.un.org | [@UNGGIM](https://twitter.com/UNGGIM)



UN-GGIM
UNITED NATIONS
COMMITTEE OF EXPERTS ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

Our Speakers



Mr David McCollin
Lands and Survey Department
Barbados



Mr David Henderson
Ordnance Survey
United Kingdom



Mr Viliami Folau
Ministry of Lands and Natural Resources
Tonga



Ms Kristine Hirschhorn
Natural Resources Canada
Canada



Ms Mary Smyth
Central Statistics Office
Ireland



Ms Alicia Edwards
Ministry of Economic Growth and Job Creation
Jamaica



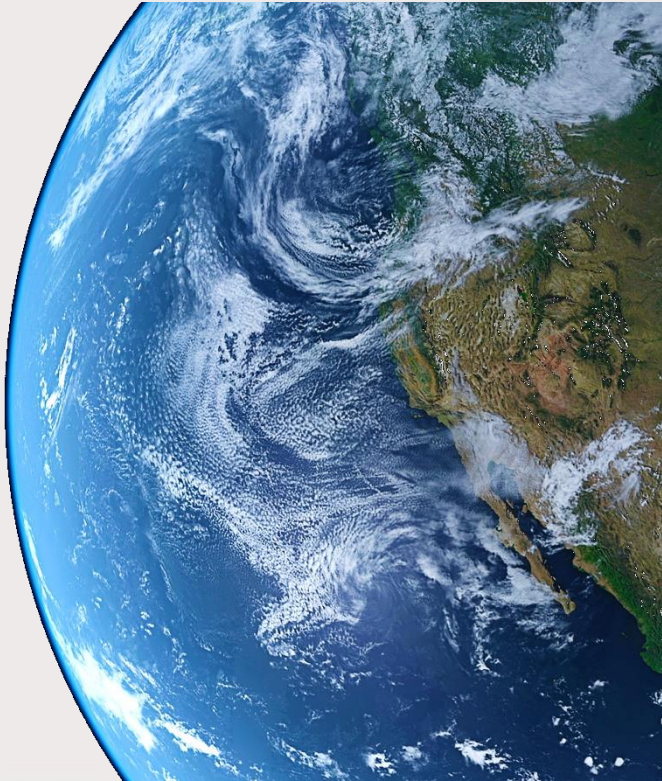
Mr Lorenzo De Simone
Food and Agriculture Organisation



Mr John Crowley
MapAction



Geospatial information is the data of our world



- Geospatial information is a critical component of the national infrastructure and knowledge economy.
- It is an essential part of a national infrastructure and knowledge-based economy that provides a country with the blueprint for situations and their locations, and the means to integrate a wide range of government services to contribute to economic growth, national security, sustainable social development, environmental protection and national prosperity.
- All governments, both at the national and local levels, hold considerable quantities of geospatial information and location data - for example databases of schools and school performance, flood risk data and mobile phone ownership data



Climate (and) Resilience x Geospatial Information

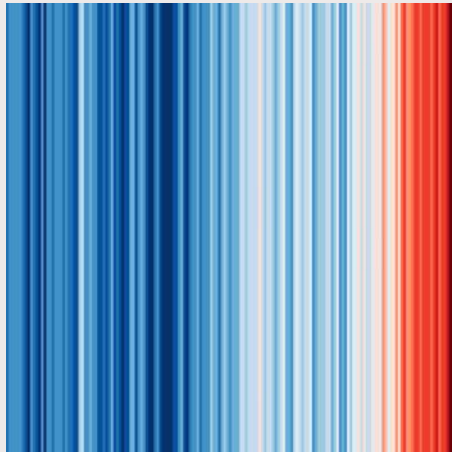
- Reducing inequality in this regard is vital. Geospatial information is the basis for evidence-based decisions as it provides the ***where, when, and how*** aspects of decision-making.
- Acting on climate resilience is not just an imperative for the Committee of Experts; **it is an imperative for the world.**



2024 Antigua and Barbuda – SIDS4



Enhancing science-based and innovative approaches, including sustainable development-oriented, inclusive and responsible use of artificial intelligence, in the non-military domain, in full respect, promotion and protection of human rights and international law, for the collection, storage, analysis, disaggregation, dissemination and use of demographic data in SIDS, including use of geospatial technologies



*Providing high-quality **spatial data** for SIDS and working to downscale global datasets to provide accurate information for SIDS.*



Global Development Frameworks

Global Geospatial Frameworks

2030 AGENDA FOR SUSTAINABLE DEVELOPMENT



INTEGRATED GEOSPATIAL INFORMATION FRAMEWORK (IGIF)

Sendai Framework for Disaster Risk Reduction 2015-2030

Paris Agreement on Climate Change

Strategic Framework on Geospatial Information and Services for Disasters

Global Statistical Geospatial Framework (GSGF)

Framework for Effective Land Administration (FELA)

Operational Framework for Integrated Marine Geospatial Information Management (UN-IGIF-Hydro)

Antigua and Barbuda Agenda for SIDS

Addis Ababa Action Agenda

Habitat III New Urban Agenda

Our Ocean, Our Future: Call for Action

Global Fundamental Geospatial Data Themes

Global Geodetic Reference Frame (GGRF)

National Institutional Arrangements in Geospatial Information Management

Role of Standards in Geospatial Information Management

Compendium on Licensing of Geospatial Information

Statement of Shared Guiding Principles for Geospatial Information Management

Future Trends in Geospatial Information Management Reports

SDGs Geospatial Roadmap

Implementing UN-GGIM Decision 13/107

Recommendation (i) **Establish a Task Team**

- Task Team on Geospatial for Climate Resilience was established following the thirteenth session
- Brought together 20+ countries to advance the paper on

Recommendation (ii) **Convene an international forum on geospatial information for climate resilience**

- Seventh High-level Forum on Global Geospatial Information Management, in Mexico City in October 2024
- Under the Theme: “Accelerating implementation: Achieving resilience”
- Under the purview of Mexico (as the hosts of the seventh HLF) and the Secretariat

Recommendation (iii) **Develop a Concept Paper**

- Acting on climate resilience was imperative and critically important to raise awareness of the potential of geospatial information for climate resilience [... it is] critically important to advocate for and raise awareness of the potential of geospatial information for climate resilience
- [There is a need to] strengthen interlinkages between geospatial, statistical, climate and other relevant communities and organizations of the United Nations system



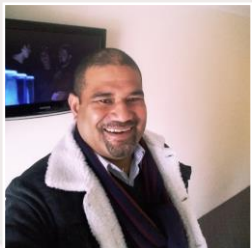
The UN-GGIM Task Team on Geospatial Information for Climate Resilience



Mr David Henderson, Chief Geospatial Officer
Ordnance Survey
United Kingdom



Mr David McCollin, Chief Surveyor
Lands and Surveys Department
Barbados



Mr Viliami Folau, Geodetic Surveyor
Ministry of Lands & Natural Resources
Tonga

Member States

Argentina
Australia
Austria
Bahamas
Barbados
Brazil
Canada
Chile
Ethiopia
Germany
Mexico
Mozambique
Nepal
Singapore
South Africa
Tonga
Turkey
United Kingdom
United States of America



Our Work Activities

Our paper on 'Applying Geospatial Information to Climate Challenges'

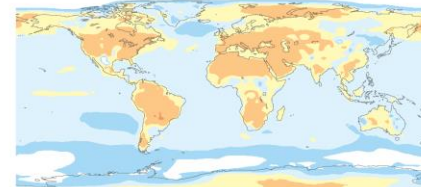


Capturing Country Experiences

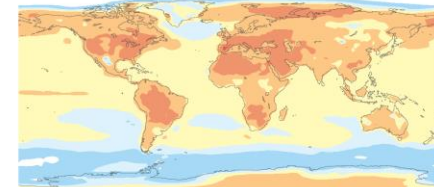
FAQ3.1: Impact of 1.5°C and 2.0°C global warming

Temperature rise is not uniform across the world. Some regions will experience greater increases in hot days and decreases in cold nights than others

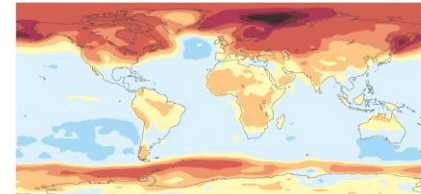
+ 1.5°C: Change in average temperature of hottest days



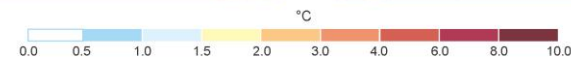
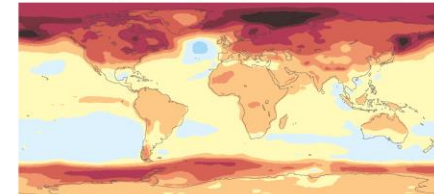
+ 2.0°C: Change in average temperature of hottest days



+ 1.5°C: Change in average temperature of coldest nights



+ 2.0°C: Change in average temperature of coldest nights



<https://www.ipcc.ch/sr15/chapter/>



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United Nations Committee of Experts on Global Geospatial Information Management
Task Team on Geospatial Information for Climate Resilience

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The Road So Far

- Since its inception in 2011, UN-GGIM has worked on climate resilience and SIDS issues across its work programme
- In 2022, the Cambridge Conference community looked at ‘How’ NGIAs and their sponsor governments can help to adapt to our changing climate and mitigate the impacts on our environment, economies and communities.
- In 2023: the Ordnance Survey and Secretariat developed the “Geospatial Information for Climate Resilience – What Does UN-GGIM Do?” and submitted it as a background document at the 13th Session of UN-GGIM in August 2023 and a Side Event was convened at the 13th session to raise awareness of the paper
- Leading to UN-GGIM Decision 13/107 and the formation of the UN-GGIM Task Team on Climate Resilience



Geospatial Information for Climate Resilience – What Does UN-GGIM Do?

A Discussion Paper



Ordnance Survey
SEE > BETTER PLACE



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The Road So Far (cont)

- In establishing the task team, we have focused on bringing together Member States
- On 24 January 2024, the Bureau welcomed the establishment of the Task Team, our Terms of Reference, plan of work, and structure of our paper “Applying Geospatial Information to Climate Challenges”
- Since the bureau’s endorsement, we have advanced on this papers, collated many examples of good practice, and are supporting the Advisory Committee of the 7th High-Level Forum with delivering a day on climate and resilience.
- We also convened a side event at SIDS4 (complementing events by UN-GGKIC and UN-GGIM Americas)



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Ordnance Survey
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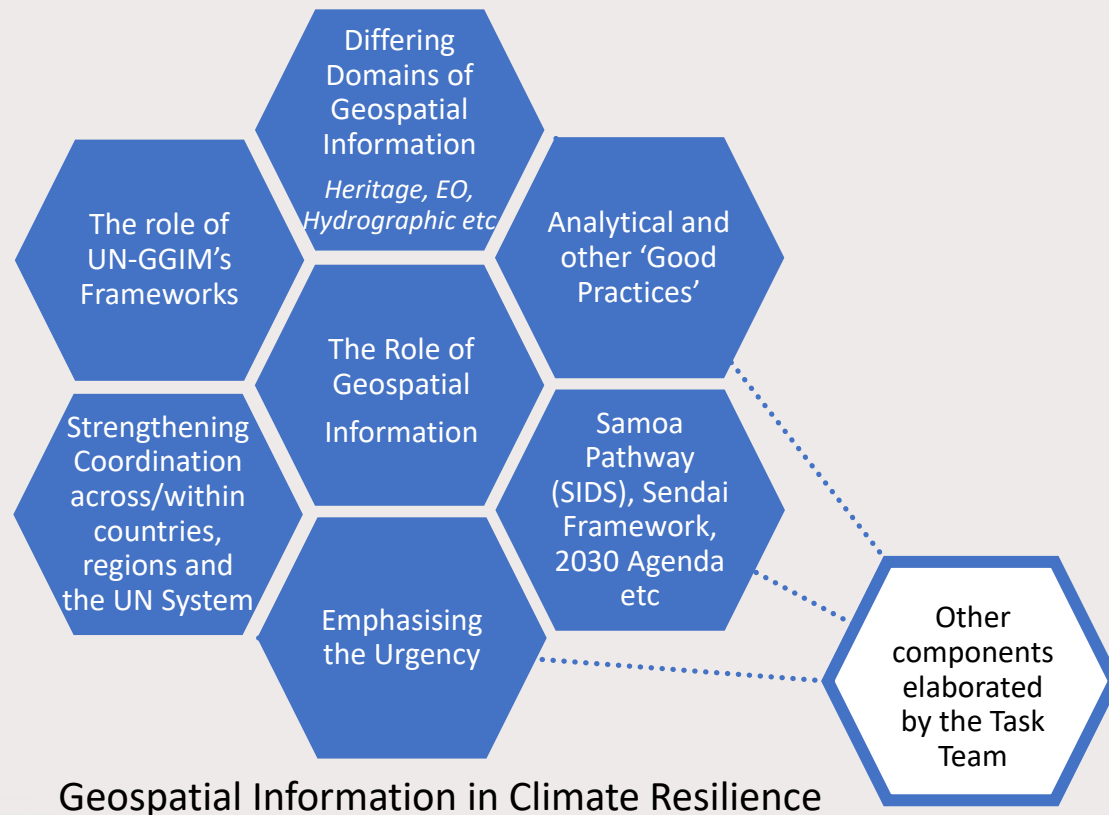


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Developing the ‘Applying Geospatial Information to Climate Challenges’ Paper



- We are not defining climate resilience but leveraging the Committee of Experts’ functional groups and architecture to foster progress
- We are collecting **national experiences** of how geospatial information helps build climate resilience; showcasing the “**how**” **National Geospatial Information Agencies** are currently responding
- The **UN Integrated Geospatial Information Framework** is the anchor for our work, but we also recognize the vital role of UN-GGIM’s frameworks
- We emphasize that acting on climate resilience is imperative and critically important to raise awareness of the potential of geospatial information for climate resilience, especially for SIDS



National Experiences of Geospatial Information for Climate Resilience (1)

1. AI frameworks for the prediction of bark beetle infestation risk in a continuous monitoring scenario [Submitted by Austria].
2. The impacts of climate change on human health and the health care system [Submitted by Austria].
3. Subsidence and landslide monitoring [Submitted by Austria].
4. Flood hazard mapping for Canada [Submitted by Canada].
5. Spatial data infrastructure enabling seamless sharing of geospatial data across borders and time for the Arctic region [Submitted by Canada].
6. Mapping the effects of heavy rainfall [Submitted by Germany]
7. Digital Twin for Germany [Submitted by Germany]
8. Integrating Geospatial Insights for Community Empowerment and Ecosystem Services: Isimangaliso Wetland Park [Submitted by South Africa]



National Experiences of Geospatial Information for Climate Resilience(2)

1. The Street Addressing Initiative of the US Virgin Islands [Submitted by United States of America]
2. Analysis of coastal erosion and rising sea levels inform coastal erosion risk assessment and adaptation planning [Submitted by the United Kingdom of Great Britain and Northern Ireland]
3. Environmental monitoring and applied research to monitor hydrometeorological disasters [Submitted by Brazil].
4. Generation knowledge of Brazil and its population [Submitted by Brazil]
5. Chile's response to wildfire event – January 2024 [Submitted by Chile]
6. Increasing climate resilience using geographic information system technologies [Submitted by Mozambique].
7. Improved resilience to natural hazards including those affected by climate change [Submitted by Barbados]
8. The Military Geographic Institute of Uruguay and its efforts to promote climate resilience [Submitted by Uruguay]



National Experiences of Geospatial Information for Climate Resilience

- Topics desired include:
- Forestry
 - Sargassum
 - Flooding
 - Community Resilience
 - Landslides and Land Subsidence
 - Hurricanes
 - Sea level changes
 - Land Administration and Management
 - Biodiversity
 - Human Health
 - Arctic and Polar Ice
- Coral bleaching
 - Algae blooms
 - Agriculture
 - Desertification
 - Droughts
 - Digital Twins
 - Rainfall and our changing weather patterns
 - Early warning
 - Wildfires





**SAVE
THE
DATE**

**8-10
OCTOBER
2024**

**ACCELERATING IMPLEMENTATION;
ACHIEVING RESILIENCE**



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MEXICO CITY



Takeaways

- We still have a long way to go, but we should be encouraged by the positive steps that are already taking place.
- The architecture of the Committee is crucial – we need to ensure full participation from all Member States
- If you are working on projects using geospatial data and climate change data, please do reach out to us in the Task Team.



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