"Geospatial Data Driving DRRM during the Decade of Action"



Name: Simone Michelle Lloyd, GISP Event: 8th UN-GGIM: Europe Session Date: Wednesday October 13, 2021



Presenter Bio

- A certified geospatial professional from Jamaica who serves as the Acting Principal Director of the National Spatial Data Management Branch of Jamaica's Ministry of Housing, Urban Renewal, Environment and Climate Change (MHURECC).
- She serves as Jamaica's Focal Point and Head of Delegation to the UN-GGIM Committee of Experts, with Jamaica cochairmanship support and leadership of Task Groups A & C of the UN-GGIM Working Group on Geospatial Information and Services for Disasters;
- Additionally, Jamaica's Focal Point in UN-GGIM: Americas, serving on the CARIGEO Steering Committee and provides UN-GGIM: Americas' representation on the High Level Group (HLG) on Integrated Geospatial Information Management (IGIF).

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EUROPE



Simone Michelle Lloyd, GISP MSc

Task Groups A & C Lead, UN-GGIM WG Disasters Principal Director National Spatial Data Management Branch Ministry of Housing, Urban Renewal, Environment & Climate Change, Jamaica



UNITED NATIONS COMMITTEE OF EXPERTS ON GLOBAL GEOSPATIAL INFORMATION MANAGEMENT

UN-GGIM Working Group on Geospatial Information and Services for Disasters

"Geospatial Data Driving DRRM during the Decade of Action"



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Outline

- Disaster Context of Europe
- UN-GGIM WG Disasters Genesis and Mandate
- Sendai Framework & the Strategic Framework
- DRRM Phases: Importance of Geospatial Data
- SDGs Decade of Action
- Strategic Framework Assessment Results Europe
- Engaging Europe's Support



NEWS

Disasters in Europe: more frequent and causing more damage

The number and impacts of disasters have increased in Europe in the period 1998-2009, a new report by the European Environment Agency (EEA) concludes. The report assesses the frequency of disasters and their impacts on humans, the economy and ecosystems and calls for better integrated risk disaster management across Europe.

Published 12 Jan 2011 — Last modified 23 Nov 2020 — 2 min read



https://www.eea.europa.eu/highlights/natural-hazards-and-technological-accidents

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Disasters in Europe: more frequent and causing more damage



- Hydrometeorological or weather related: storms, extreme temperature events, forest fires, droughts, floods
- **Geophysical:** snow avalanches, landslides, earthquakes, volcanoes and
- Technological: oil spills, industrial accidents, toxic spills from mining activities

https://www.eea.europa.eu/highlights/natural-hazards-and-technological-accidents



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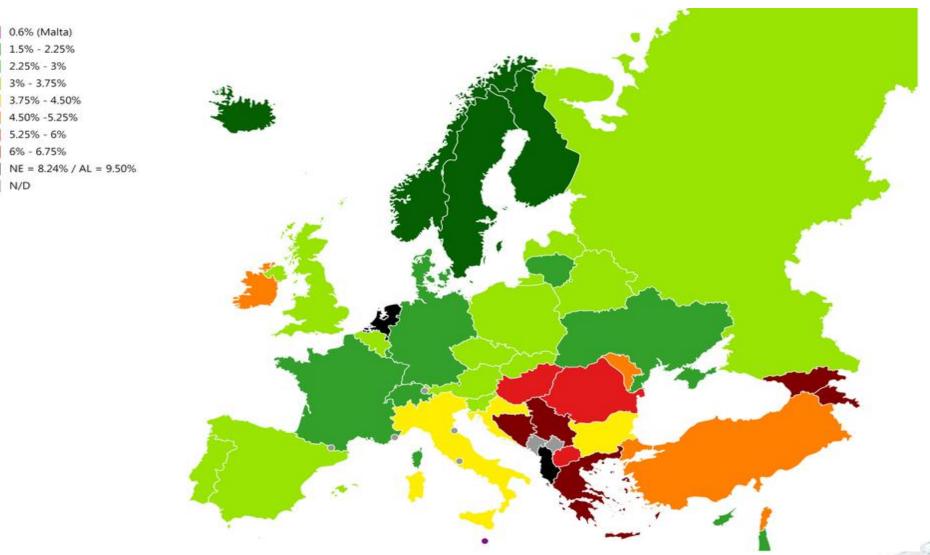




Make better decisions, faster.



European nations by natural disaster risk (World Risk Index, UN, 2016)





https://www.reddit.com/r/europe/comments/6yvgiv/european_nations_by_natural_disaster_risk_world/

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UN-GGIM WG Disasters Genesis and Mandate



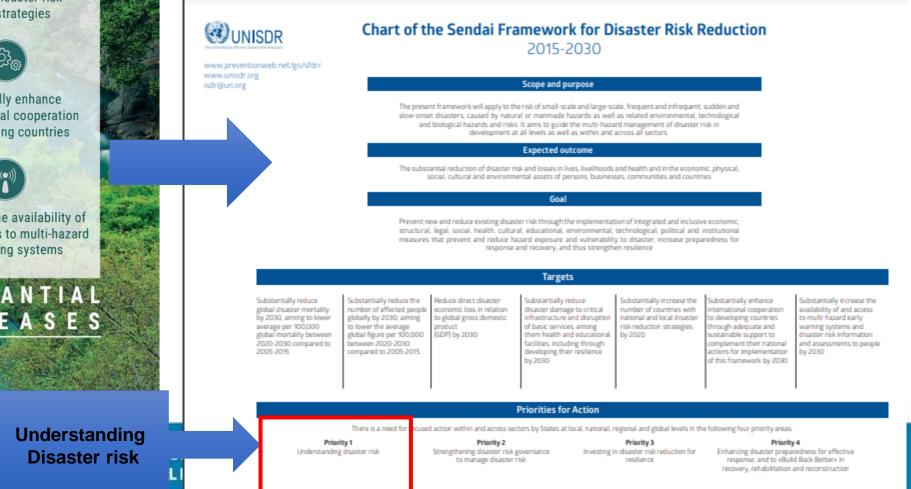
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Endorsed by the UN General Assembly following the 2015 Third UN World Conference on Disaster Risk Reduction (WCDRR), and advocates for:

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.



THE SENDAI FRAMEWORK OUTLINES SEVEN GLOBAL TARGETS TO BE ACHIEVED BY 2030:

SUBSTANTIAL REDUCTIONS

A. Reduce global disaster mortality



B. Reduce the number of affected people globally



C. Reduce direct economic loss in relation to GDP



D. Reduce disaster damage to critical infrastructure and disruption of basic services

E. Increase the number of countries with national and local disaster risk reduction strategies



F. Substantially enhance international cooperation to developing countries

G. Increase the availability of and access to multi-hazard early warning systems

SUBSTANTIAL INCREASES

Provides Member States with concrete actions to protect development gains from the risk of

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Aligned

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United Nations Committee of Experts on Global Geospatial Information Management

ggim.un.org

Strategic Framework on Geospatial Information and Services for Disasters

Working Group on Geospatial Information and Services for Disasters (WG-GISD) The United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM)



United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) in August 2015, under decision 5/110 supported the proposal to establish a working group to further develop and implement a strategic framework that would be:

Focused in a practical manner;

Aligned with the outcome and follow-up to the **Sendai Framework for Disaster Risk Reduction 2015-2030** and its implementation;

Able to take into consideration the **special needs of developing countries**, especially with respect to **capacity building and knowledge sharing** and;



Broadly representative of **different regions of the world** and taking into account regional experiences.





Vision:

 Accurate, timely and reliable geospatial information and services are available, in a coordinated way, to decision makers and operational leads prior to, during and post disasters.

Provide a forum for dialogue and coordination among member states, UN system, DRR organizations etc. Improve the availability, accessibility and timeliness of good quality geospatial information for DRR

Encourage greater coordination and collaboration on geospatial information activities for DRM



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Strategic Framework on **Geospatial Information and** Services for Disasters

Strategic Framework on Geospatial Information and Services for Disasters 2016 - 2030

Scope and Purpose

The strategic framework aims to guide all stakeholders and partners in the management of geospatial information and services in all phases of Disaster Risk Reduction and Management (DRRM)

Expected Outcome

The human, economic, and environmental risks and impacts of disasters are prevented and reduced through the use of geospatial information and services

Goal

Quality geospatial information and services are available and accessible in a timely and coordinated way to support decision-making and operations within and among all stakeholders and partners and in all phases of DRRM

Priorities for Action

Member States with the support of regional and international organizations as well as other relevant organizations should focus their action on the following five priorities for action:

Priority 1 Governance and Policies	Priority 2 Awareness Raising and Capacity Building	Priority 3 Data Management	Priority 4 Common Infrastructure and Services	Priority 5 Resource Mobilization
Policies, collaborative agreements and legal frameworks aiming at improving the availability and cessibility of quality geospatial formation and services among all stakeholders and partners tablished and implemented in all phases of DRRM	Awareness is raised among concerned entities on the importance of geospatial information and services and all necessary technical and human capacities are built and/or strengthened especially in the pre- disaster phase of DRRM	Geospatial databases and information products are developed based on common standards, protocols and processes as important tools in every decision-making process across all phases of DRRM	Common facilities and services are established for all key stakeholders and partners to have a common operational picture of emergency scenarios especially during and in the post-disaster phases of DRRM	All necessary technical, human and financial resources are available to sustain all the activities of DRRM

Guiding Principle

e strategic framework is guided by the 2030 Agenda for Sustainable Development, International Strategy for Disaster Reduction, Sendai Framework for Disaster Risk duction 2015-2030, UN General Assembly resolution on international cooperation on humanitarian assistance in the field of natural disasters, from relief to velopment and other relevant instruments. It is also guided by the principles of open data and requirements of national data infrastructure, and by the UN-GGIM's n Statement of Shared Principles for the Management of Geospatial Information.

Five **Priorities** for

Action



Governance and Policies

> **Common Infrastructure** and Services

Awareness Raising

and Capacity Building



Data

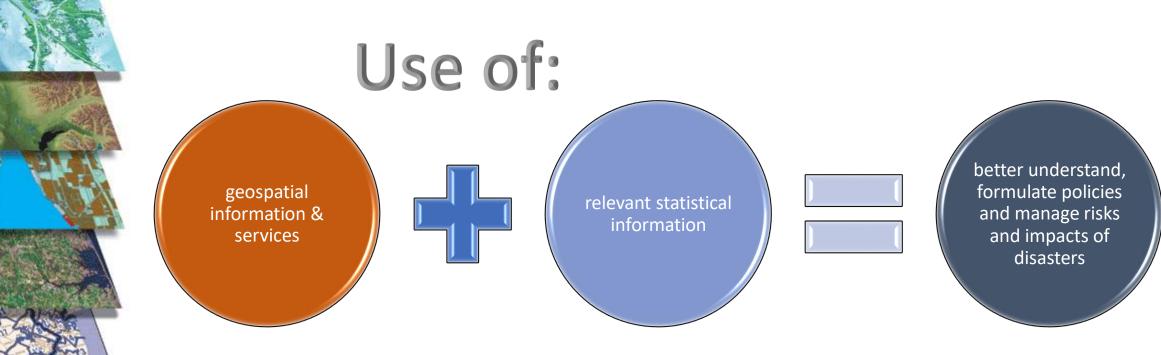
Management

http://ggim.un.org/documents/UN-GGIM Strategic Framework Disasters final.pdf

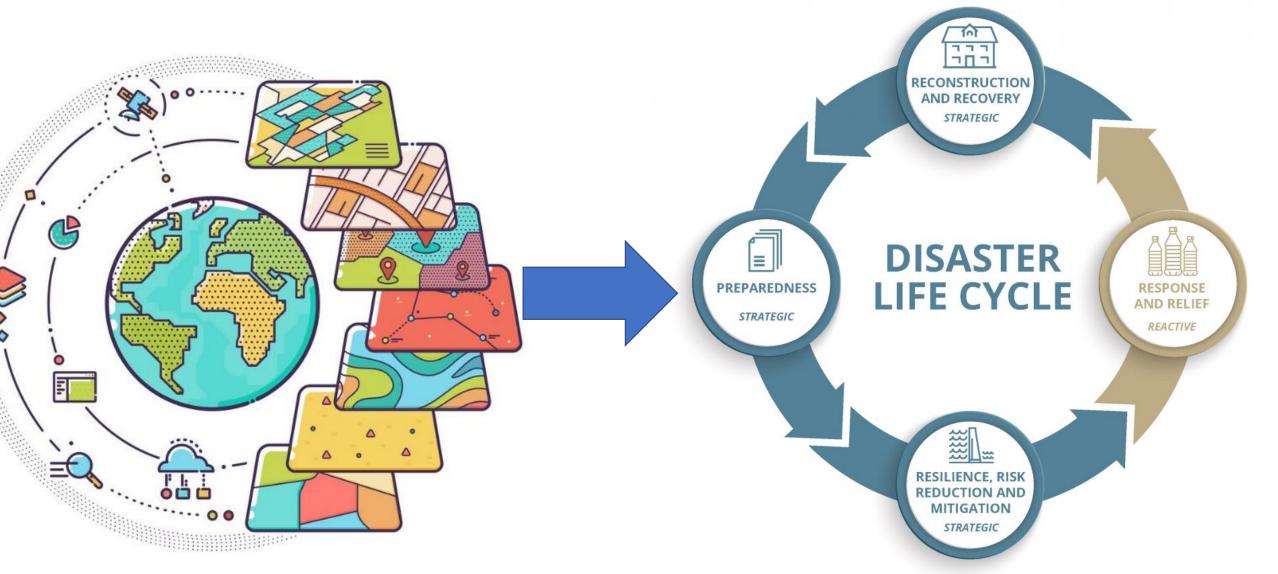
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The Framework aims to guide Member States and other stakeholders in making available and accessible all quality geospatial information and services before, during and after disaster events.



Member States



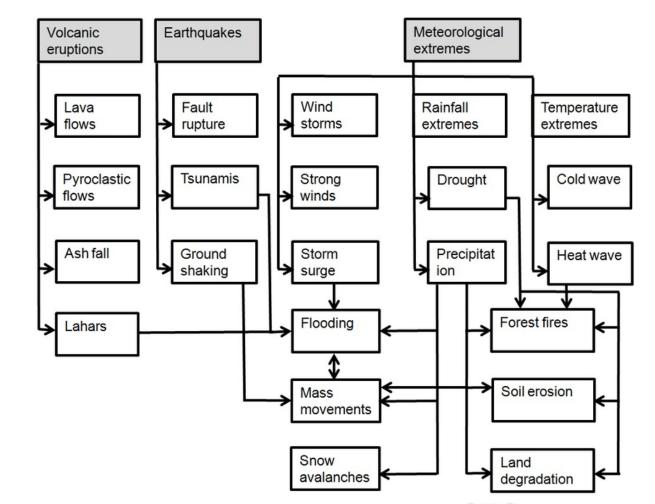
https://disasterphilanthropy.org/wp-content/uploads/2016/08/Disaster-life-cycle_designed_2020-edit-1-e1617300681628.png



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Geospatial Information integrally supports:

- Mapping and understanding of hazards
- Monitoring and forecasting of upcoming hazard events
- Processing and disseminating understandable warnings to political authorities and the public
- Making appropriate and timely actions in response to alerts
- Conducting modelling of potential impact and analysis of actual disaster impacts
- Strategizing appropriate response activities



https://www.researchgate.net/figure/Examples-of-multi-hazards-and-their-

interactions-required-for-multi-hazard-risk fig2 285929471



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Examining disasters is fundamental to achieving the SDGs





an Initiative implemented by the Americas Regional Committee of United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM: Americas)

GLOBAL GEOSPATIAL INFORMATION MANAGEMENT

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Caribbean GeoPortal https://www.caribbeangeoportal.com/

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Why does geography matter?

Location intelligence is the ability to analyze and find spatial patterns in data, to provide powerful insights into understanding our world and communicating our needs. This is possible through a combination of local data and advanced geospatial tools, with training that's included for anyone working on geospatial challenges across the region.

Caribbean GeoPortal Data Tools Learn Map About Us

Inspiring communities through geography





We are deeply committed to supporting innovation in the Caribbean, helping users discover, explore, and understand the vast information available to them through the power of maps Jack Dangermond

President and Founder of Esri

WGDisasters-15

The Caribbean GeoPortal

Inspiring communities through geography

- An open mapping community for the Caribbean
 - **Data** by Esri, Partners, Governments, other authoritative producers and the Community e.g., NOAA, NASA
 - Analytical tools for spatial data
 - Hands on **software training**
 - Publish your own data online
 - Field data collection tools
 - Configurable web applications





Supporting Disaster Response in the Caribbean



Tropical Cyclones -Watches, Warnings, and Track/Intensity Forecasts

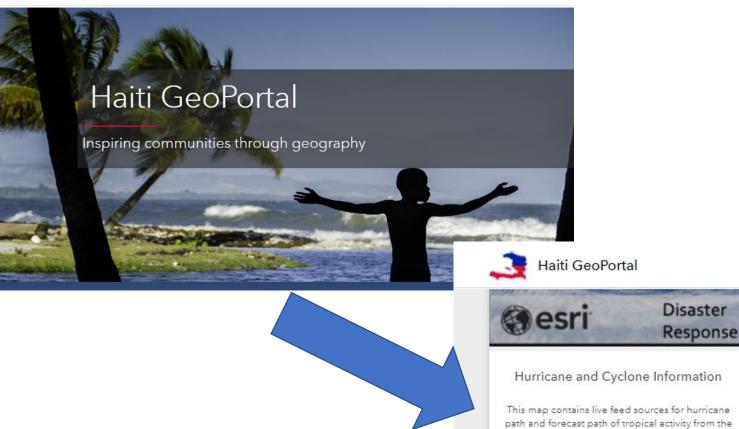
Map Image Layer by NOAA.GeoPlatform

Map displaying the latest NWS/National Hurricane Center (NHC) and Central Pacific Hurricane Center (CPHC) tropical storm and hurricane infor...

View item details [



The latest NWS/National Hurricane Center (NHC) and Central Pacific Hurricane Center (CPHC) tropical storm and hurricane information





Earthquake Information

Map containing live feed sources for earthquakes

with a magnitude 3.5 or greater during the past 90

days.

Recent Global Earthquakes

This web app presents recent glob information from the U.S. Geolog

Better Understand and Prepare for Hurricane Season





National Hurricane Center and Joint Typhoon...

Hurricane season has arrived!

Learn how to create a hurricane map, plan for emergency response and view live hurricane data in this curated se follow step by step lessons to help you better understand and prepare for this year's hurricane season.

This nine step lesson plan will teach you the skills to use data and tools available in the Haiti GeoPortal to build m time data, determine levels of risk, effectively allocate resources, and collect and report on damage assessments.



Global Landslide Susceptibility

Global Landalide Susceptibility Map Landalide Susceptibility Very Low Low Moderate High Very High

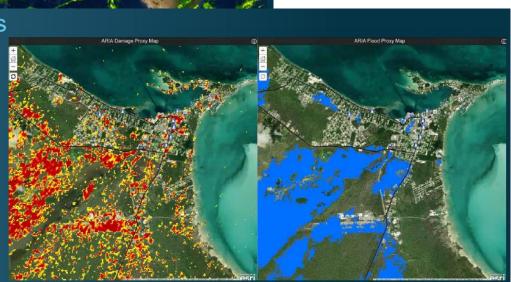
Global Precipitation Measurement Products

- 30-min, 3-hour, 1-day, 7-day total accumulations
- Resolution: 0.1 degrees
- Updated every 3 hours

Show What's Possible

- Damage and Flood Proxy Maps Resolution: 30m
- SAR-based change detection
- Combine with infrastructure data to show potentially damaged or flooded assets





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Strategic Framework Assessment Results - Europe



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Global Survey Administration

The survey was prepared as an online form and circulated to the UN-GGIM Member States and observers from June - October 2020.



UN-GGIM EUROPE

BACKGROUND INFORMATION

Strategic Framework on Geospatial Information and Services for Disasters ASSESSMENT SURVEY

> UNITED NATIONS COMMITTEE OF EXPERTS ON GLOBAL GEOSPATIAL INFORMATION MANAGEMENT

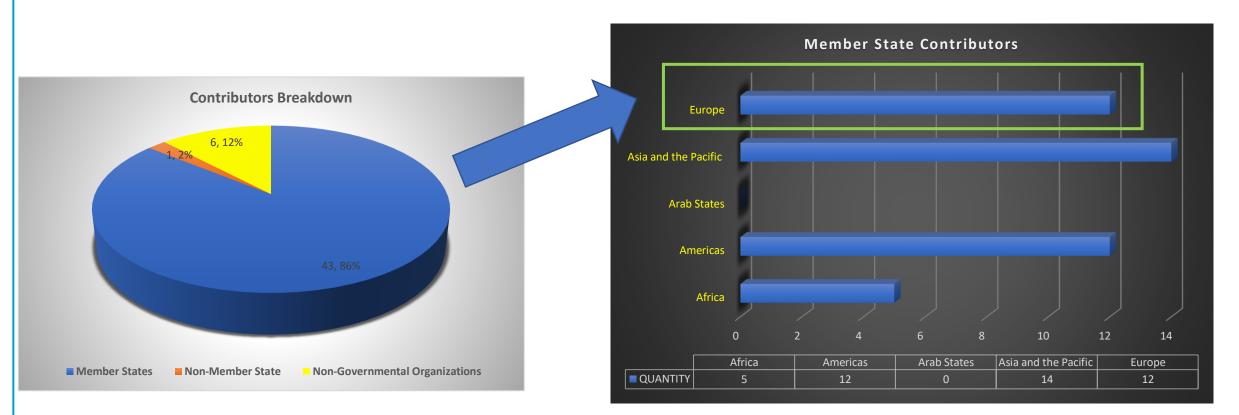
Global Survey Administration

- Global Administered Assessment Survey (July Oct 2020)
- Background Paper: "Assessment 2020 Results Strategic Framework on Geospatial Information & Services for Disasters".
- https://ggim.un.org/meetings/GGIM-committee/11th-Session/documents/Assessment-Results-2020-Strategic-Framework-dr.1.pdf
- Presented and endorsed at 11th Session of UN-GGIM Committee of Experts

Strategic Framework on Geospatial Information and Services for Disasters ASSESSMENT SURVEY BACKGROUND INFORMATION 1. Full Name



Analysis Process





The analysis was undertaken using the 43 responses from Member States and assessment executed for three regions namely the Americas, Europe and Asia and the Pacific. Analysis was not undertaken for Africa given the low number responses received that would not allow for a true representative sample and related results. No responses were received from the Arab States.



Assessment Survey Analysis Focus Areas

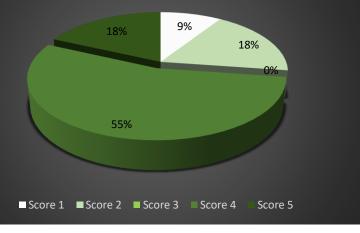
Priority Area	Focus Areas			
Α	1. Political Support			
	2. Financial Support			
	3. Champion Identified			
	4. Monitoring & Evaluation Program Implemented to track Country's Progress			
	1. Geospatial information and services are translated into easily understood strategies and tools			
	2. GI & Services integrated in Academic Programs			
В	DRM-related researches using GI & Services are initiated and managed			
	4. Training programs on the use of GI & Services			
	1. Existence of a common and accessible database system			
	2. National and local DRM plans include hazard, vulnerability and disaster risk assessment maps, etc.			
С	A common contact database of national and local emergency responders			
	4. Data management guidelines incorporates key factors			
	1. A common infrastructure and facility, particularly a national operations center is established			
D	A backup facility for online and offline access to geospatial data			
	Interoperability of all systems and processes in DRM organizations			
	 DRM organizations are sensitized on the necessity of funding GI & Services for DRM 			
E	2. The private sector encouraged to invest in GI & Services for DRM			
	3. Funding support easily accessible for implementation of the five priorities for action			



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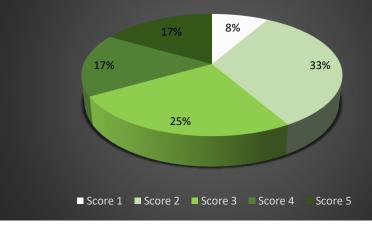
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Political Support (Europe)

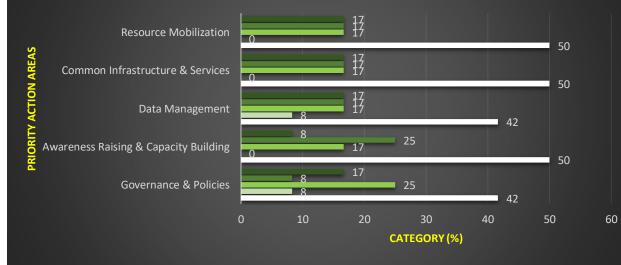


Priority 1:

Financial Support (Europe)



Monitoring & Evaluation Program Implemented to track Country's Progress (Europe)

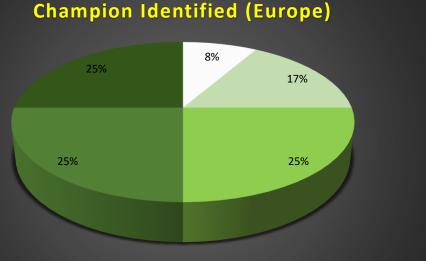


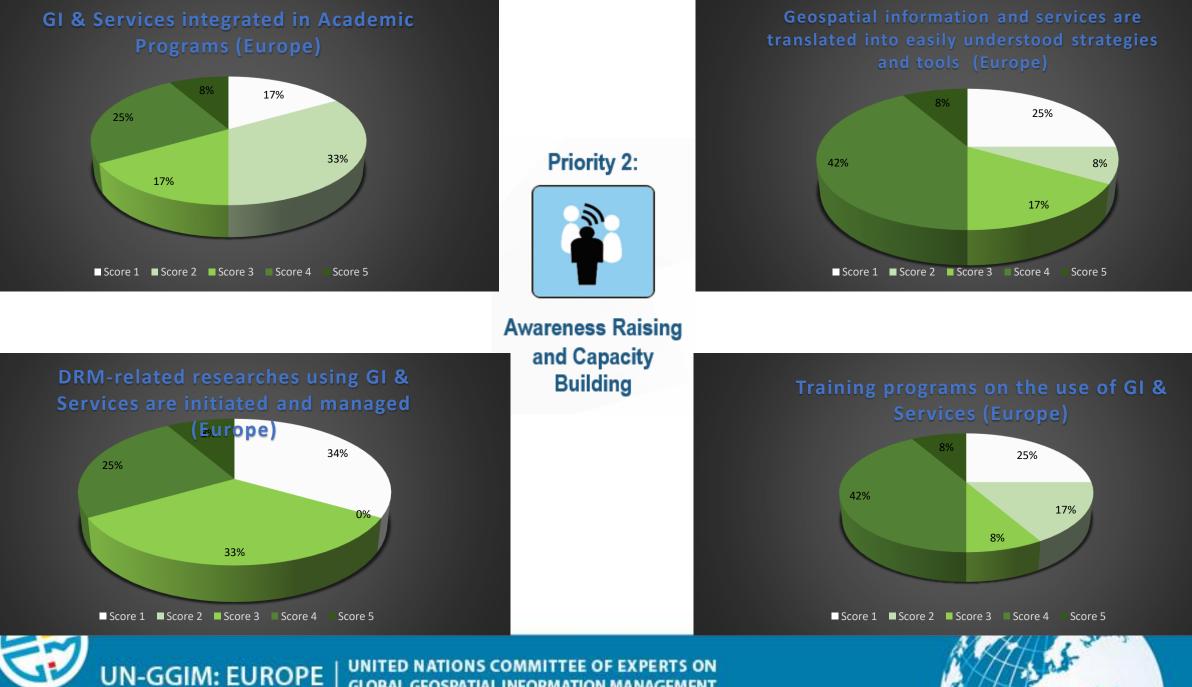
Score 5 ■ Score 4 ■ Score 3 ■ Score 2 ■ Score 1



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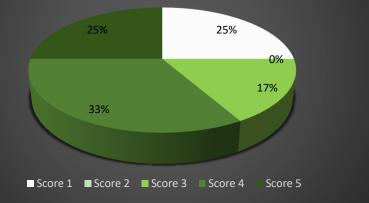




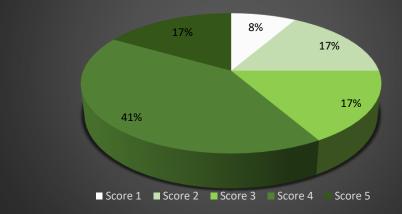


GLOBAL GEOSPATIAL INFORMATION MANAGEMENT

Existence of a common and accessible database system (Europe)



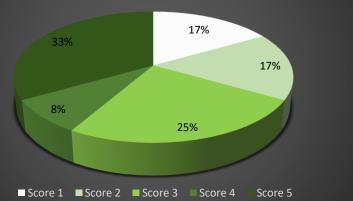
National and local DRM plans include hazard, vulnerability and disaster risk assessment maps, etc.(Europe)



Data Management

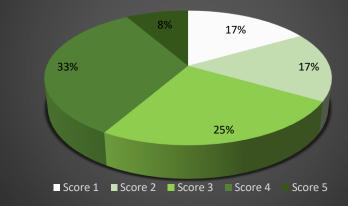
Priority 3:

A common contact database of national and local emergency responders (Europe)



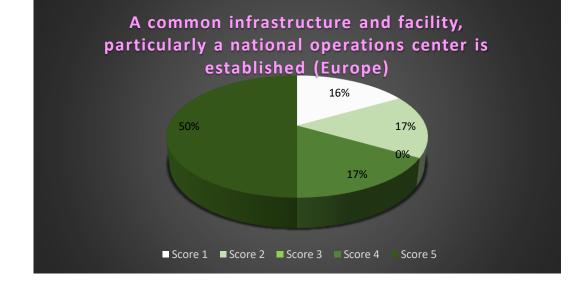
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Data management guidelines incorporates key factors (Europe)



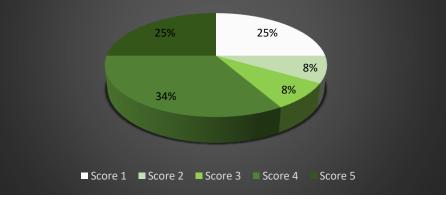


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DRM organizations are sensitized on the necessity of funding GI & Services for DRM (Europe)





Engaging Europe's Support



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UN-GGIM WG Disasters Workplan 2020 - 2023 Execution

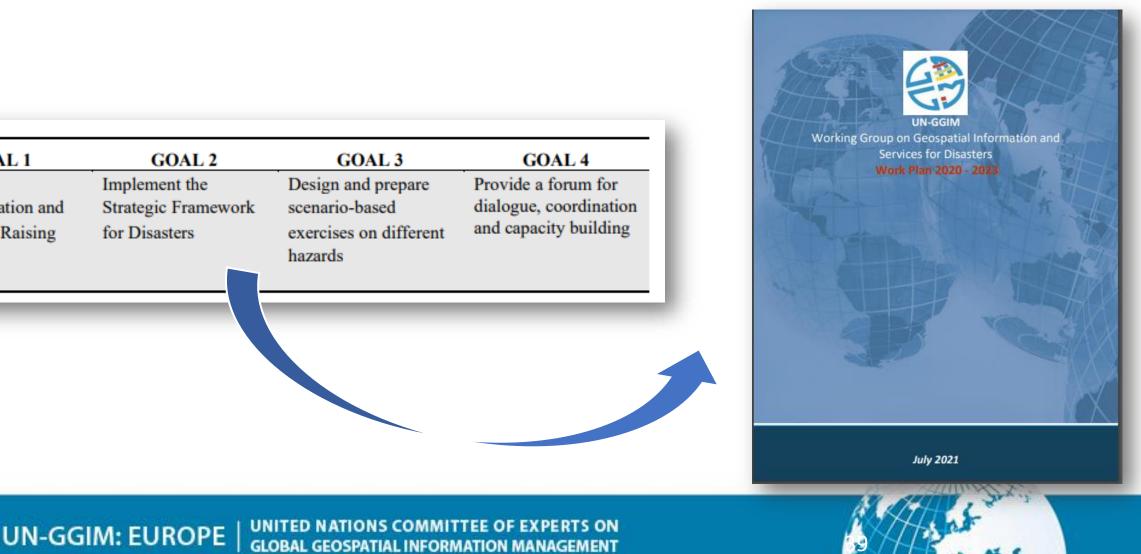
GOAL 1

Communication and

Awareness Raising

Foster







Europe's Support

- Support of European members of the WG and European member states and bodies in collaboration initiatives and execution of workplan goals and activities.
- Good practices within Europe can support knowledge sharing in countries within the region and in other regions.
- Europe's good results/progress in identified priority areas needed to support work to implement the Strategic Framework in countries where there is a need.

UN-GGIM WG Disasters - DRR inventories

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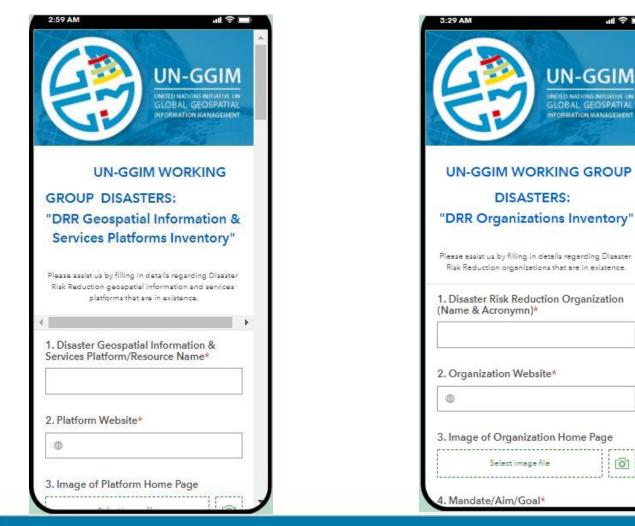
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FORMATION MANAGEME

DISASTERS:

Select image file





- Two surveys were developed for administration to facilitate the development and maintenance of inventory hubs to be hosted on UN-GGIM WG Disasters webpage.
- Developed: June 2021 .
- Administration: proposed for post 11th UN-GGGIM Session
- **Needed:** Support of Europe to • complete the DRR Surveys during global consultation process.





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UN-GGIM Working Group on Geospatial Information and Services for Disasters

"Geospatial Data Driving DRRM during the Decade of Action"



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Simone Lloyd, GISP

October 13, 2021

simone.Lloyd@mhurecc.gov.jm

https://www.linkedin.com/in/simone-michelle-lloyd-gisp-msc-pg-dips-

ginf-gis-ed-aa20b754/



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