

**UN ECLAC DRM Workshop #1:
“Policy Issues Towards Effective Applications of Geospatial Technology & Data in Support of DRM in the Caribbean”**

“Supporting Geo-enabled DRM within the Caribbean Region”

**Monday August 30, 2021
9:00 - 12:00 am (UTC-04)**

Presenter Bio

- A certified geospatial professional from Jamaica who serves as the Senior GIS Manager & Trainer within the National Spatial Data Management Branch of Jamaica's Ministry of Housing, Urban Renewal, Environment and Climate Change (MHURECC). She coordinates Jamaica's National Emergency Response GIS Team (NERGIST).
- She also serves as Jamaica's Focal Point and Head of Delegation to the UN-GGIM Committee of Experts, with Jamaica co-chairmanship 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).



Simone Michelle Lloyd, GISP MSc.

*Senior GIS Manager/Trainer
Coordinator, Jamaica's National Emergency Response GIS Team
Task Groups Lead, UN-GGIM WG Disasters
National Spatial Data Management Branch
Ministry of Housing, Urban Renewal, Environment & Climate Change,
Jamaica*

Outline

- UN-GGIM WG Disasters
- Sendai Framework
- Strategic Framework on Disasters
- Strategic Framework Assessment Tool
- CARIGEO Initiative
- Jamaica's NERGIST



**“Supporting Geo-enabled DRM globally
& within the Caribbean Region**

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

Chart of the Sendai Framework for Disaster Risk Reduction
2015-2030

Scope and purpose

The present framework will apply to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters, caused by natural or manmade hazards as well as related environmental, technological and biological hazards and risks.
It aims to guide the multi-hazard management of disaster risk in development at all levels as well as within and across all sectors

Expected outcome

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

Goal

Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience

Targets

Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality between 2020-2030 compared to 2005-2015

Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 between 2020-2030 compared to 2005-2015

Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030

Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030

Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020

Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030

Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030

Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030

Priorities for Action

There is a need for focused action within and across sectors by States at local, national, regional and global levels in the following four priority areas.

Priority 1 Understanding disaster risk	Priority 2 Strengthening disaster risk governance to manage disaster risk	Priority 3 Investing in disaster risk reduction for resilience	Priority 4 Enhancing disaster preparedness for effective response, and to «Build Back Better» in recovery, rehabilitation and reconstruction
Disaster risk management needs to be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment	Disaster risk governance at the national, regional and global levels is vital to the management of disaster risk reduction in all sectors and ensuring the coherence of national and local frameworks of laws, regulations and public policies that, by defining roles and responsibilities, guide, encourage and incentivize the public and private sectors to take action and address disaster risk	Public and private investment in disaster risk prevention and reduction through structural and non-structural measures are essential to enhance the economic, social, health and cultural resilience of persons, communities, countries and their assets, as well as the environment. These can be drivers of innovation, growth and job creation. Such measures are cost-effective and instrumental to save lives, prevent and reduce losses and ensure effective recovery and rehabilitation	Experience indicates that disaster preparedness needs to be strengthened for more effective response and ensure capacities are in place for effective recovery. Disasters have also demonstrated that the recovery, rehabilitation and reconstruction phase, which needs to be prepared ahead of the disaster, is an opportunity to «Build Back Better» through integrating disaster risk reduction measures. Women and persons with disabilities should publicly lead and promote gender-equitable and universally accessible approaches during the response and reconstruction phases

Guiding Principles

Primary responsibility of States to prevent and reduce disaster risk, including through cooperation	Shared responsibility between central Government and national authorities, sectors and stakeholders as appropriate to national circumstances	Protection of persons and their assets while promoting and protecting all human rights including the right to development	Engagement from all of society	Full engagement of all State institutions of an executive and legislative nature at national and local levels	Empowerment of local authorities and communities through resources, incentives and decision-making responsibilities as appropriate	Decision-making to be inclusive and risk-informed while using a multi-hazard approach
Coherence of disaster risk reduction and sustainable development policies, plans, practices and mechanisms, across different sectors	Accounting of local and specific characteristics of disaster risks when determining measures to reduce risk	Addressing underlying risk factors cost-effectively through investment versus relying primarily on post-disaster response and recovery	«Build Back Better» for preventing the creation of, and reducing existing, disaster risk	The quality of global partnership and international cooperation to be effective, meaningful and strong	Support from developed countries and partners to developing countries to be tailored according to needs and priorities as identified by them	



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.

Leadership & Membership



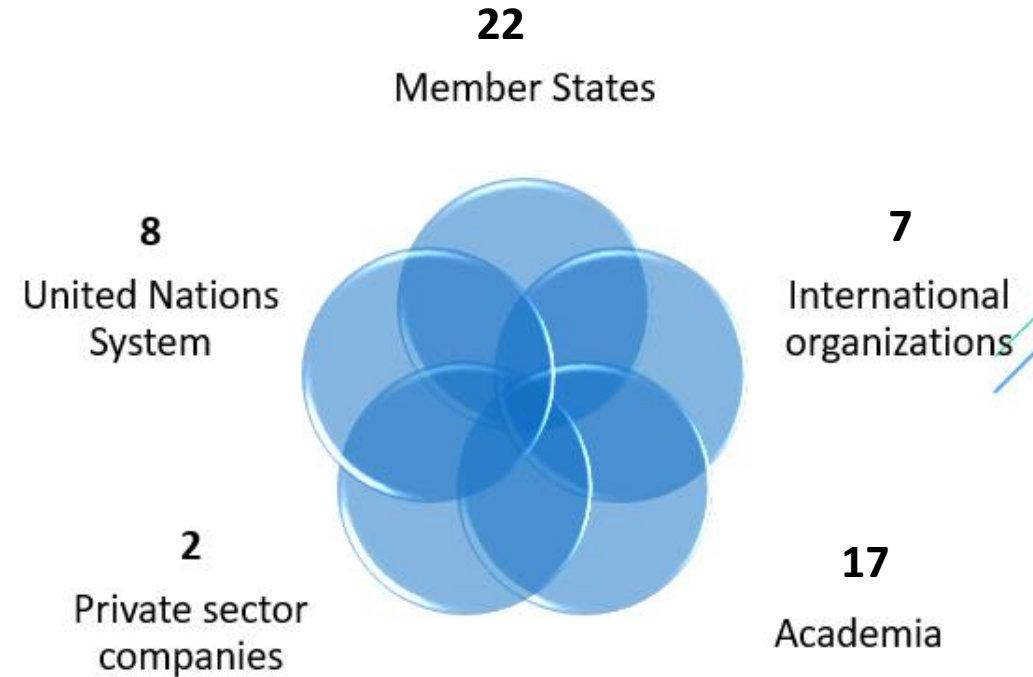
- **Co-chairmanship:** Jamaica and Japan
(August 2019 – Present)



- **Previous Co-Chairmanship:** Jamaica and Philippines
(2016 – 2019)



UN-GGIM
UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT
WG-Disasters



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UN-GGIM

UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

WG-Disasters

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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SUBSTANTIAL
INCREASES

The Sendai Framework for Disaster Risk Reduction articulates a very specific goal:
to considerably diminish disaster risk and losses of lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries

Aligned

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)

August 2017



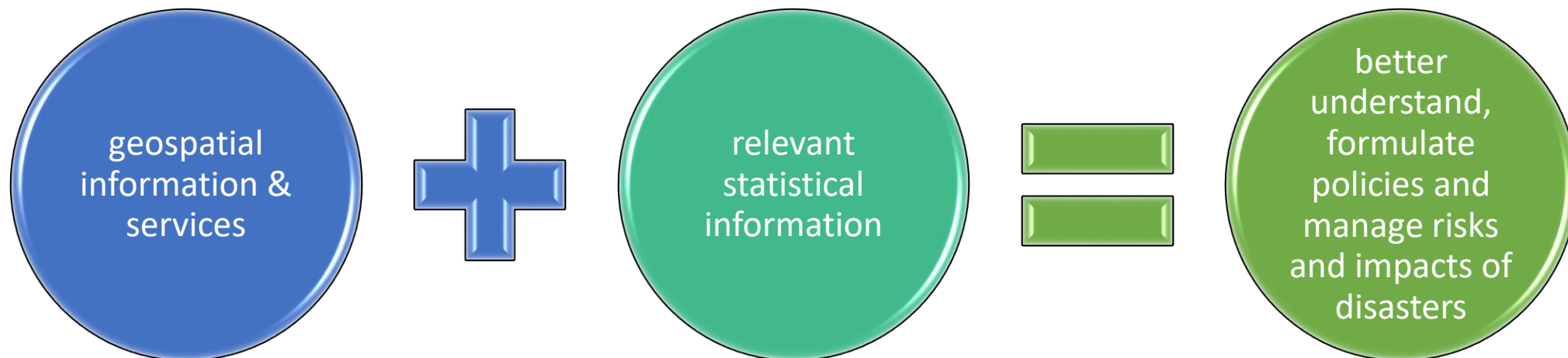
UN-GGIM

United Nations Committee of Experts on
Global Geospatial Information Management

ggim.un.org

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

Use of:

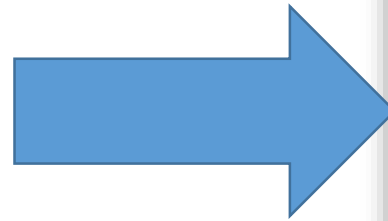
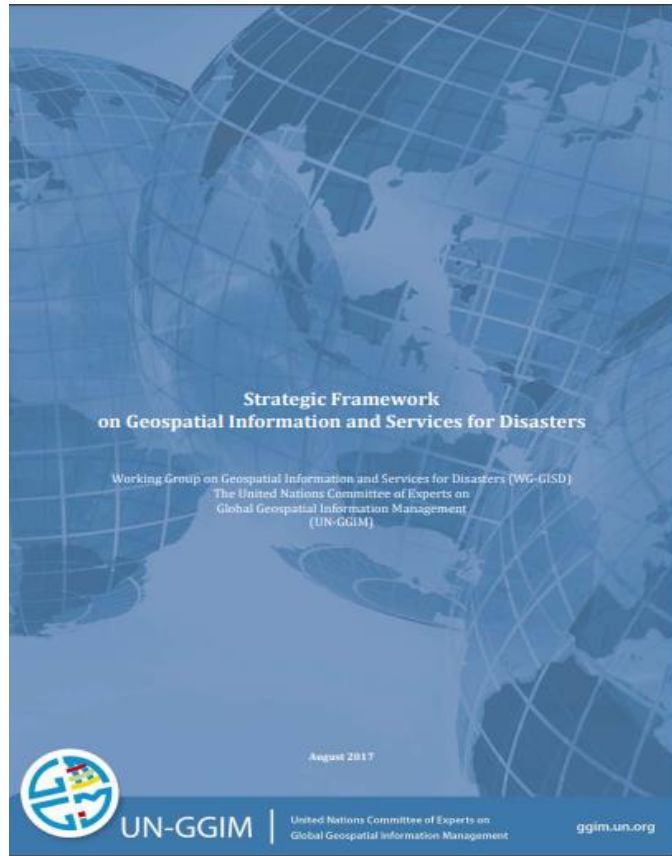


Member States



UN-GGIM: Americas

Strategic Framework on Geospatial Information & Services for Disasters



It was adopted by the Committee of Experts in August 2017, and by the United Nations Economic and Social Council (ECOSOC) on 2nd July 2018.

Access the Strategic Framework here:

http://ggim.un.org/documents/UN-GGIM_Strategic_Framework_Disasters_final.pdf

The Strategic Framework on Geospatial Information and Services for Disasters was adopted by the UN Economic and Social Council in July 2018 under resolution 2018/14 (available in all 6 languages, see below, Documents then 2018)

[Arabic](#) [Chinese](#) [English](#) [French](#) [Russian](#) [Spanish](#)

Priority A:



**Governance
and Policies**

Political Support

Financial Support

Champion Identified

Monitoring & Evaluation Program Implemented to track Country's Progress

National agencies or special bodies mandated to implement the 5 priorities of action

Priority A:



Governance and Policies

Open Channels of communication to aid coordination, collaboration & exchange of GI

Plans and programs to make quality GI & Services available and accessible

Necessary laws and policies that bind all efforts in a systematic & consensus based road-map

Collaboration, coordination & partnership with Member States, NGOs, International organizations, GI & Emergency Response organizations

Mutual learning and exchange of good governance practices among Member States

Effective Channel for technical knowledge, lessons learned, best practices and case studies

Priority B:



Awareness Raising and Capacity Building

Geospatial information and services are translated into easily understood strategies and tools

GI & Services integrated in Academic Programs

DRM-related researches using GI & Services are initiated and managed

Training programs on the use of GI & Services

Priority B:



Awareness Raising and Capacity Building

Harness technical expertise of international partners and donors in using Geospatial information and services

Active and inclusive use of Media on the local and national levels in raising public awareness on GI & Services

Competencies of DRM organizations in establishing spatial data infrastructures and open data are developed and maintained

Best Practices from other Member States and institutions are benchmarked and cascaded locally

Priority C:



Data Management

Existence of a common and accessible database system

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

A common contact database of national and local emergency responders

Data management guidelines incorporates key factors

Priority C:



Data Management

Humanitarian profiling and event/incident scenario building before, during and after a disaster

Business use cases and data/information product templates (eg. hazard and risk models etc).

Integration of geospatial data and statistics in DRM plans and programmes

National mechanisms to encourage government and international organizations to opening share their data

Best practices adopted for data use standards, protocols, processes

Priority D:



Common Infrastructure and Services

A common infrastructure and facility, particularly a national operations center is established

A maintenance programme supporting the common infrastructure & facility

A backup facility for online and offline access to geospatial data

Interoperability of all systems and processes in DRM organizations

Integrity of established common infrastructures & services (regular emergency simulation exercises)

Technical assistance from other Member States & International organizations to establish local infrastructure and services

Priority E:



Resource Mobilization

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

Academe and other scientific and research institutions are encouraged to secure funding for SF implementation

The private sector encouraged to invest in GI & Services for DRM

Funding support easily accessible for implementation of the five priorities for action

Global Survey Administration

- The survey was prepared as an online form and circulated to the UN-GGIM Member States, and observers in June 2020, with a completion deadline of 2nd October 2020.



Strategic Framework on Geospatial Information and Services for Disasters ASSESSMENT SURVEY

The Working Group on Geospatial Information and Services for Disasters (WG-Disasters) of the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) has formulated a Strategic Framework on Geospatial Information and Services for Disasters which has been adopted by the Committee of Experts in August 2017, and by the United Nations Economic and Social Council (ECOSOC) on 2 July 2018. 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. More about the Framework is available at this link <http://ggim.un.org/documents/UN-GGIM_Strategic_Framework_Disasters_final.pdf>.

In view of this, the WG-Disasters is conducting an Assessment Survey that will help gauge the level and status of implementation of geospatial information and services for disasters initiatives relative to the Strategic Framework among Member States. The Survey aims to understand the national geospatial information and services landscape across all phases of disasters within Member States. Alternatively, the tool can be used by Member States to better develop their national implementation plans for geospatial information and services in support of disaster risk reduction and management (DRRM).

The Survey will require approximately 30-45 minutes to complete. It is intended to be accomplished by the representative of each Member State in the WG-Disasters or the designated focal organization that has the mandate for national DRRM. While the Survey intends to capture national perspective, the views and opinions of other national government agencies, sub-national government units, private sector and other stakeholders in DRRM is encouraged in order to aid Member States in preparing an integrated national assessment.

The activities in each priority area will be rated using the rating scale. It is important that the assessment be made in reference to established policies, infrastructures, systems or procedures in the national context and NOT at the organizational level. As assessments may be based on perception, additional remarks, and supporting document/s may be attached or provided to make the results as factual as possible. We commit to ensuring that all personal information will be treated with utmost confidentiality.

* Required

BACKGROUND INFORMATION

1. Full Name *

UN-GGIM Strategic Framework on Geospatial Information and Services for Disasters ASSESSMENT SURVEY

The Working Group on Geospatial Information and Services for Disasters (WG-Disasters) of the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) has formulated a Strategic Framework on Geospatial Information and Services for Disasters which has been adopted by the Committee of Experts in August 2017, and by the United Nations Economic and Social Council (ECOSOC) on 2 July 2018. 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. More about the Framework is available at this link <http://ggim.un.org/documents/UN-GGIM_Strategic_Framework_Disasters_final.pdf>.

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Category	Description
4	The initiative is fully implemented in my country
3	The initiative is currently being implemented in my country, with minor tasks still need to be done
2	The initiative is currently being implemented in my country, with major tasks still need to be done
1	The initiative is not yet implemented in my country
0	Unaware of the initiative, and its implementation in my country

Your usual cooperation will be highly acknowledged. Thank you!

Co-Chairs, WG-Disasters

Assessment Survey Structure

Five Priorities for Action



Governance
and Policies



Awareness Raising
and Capacity Building



Data
Management



Common Infrastructure
and Services



Resource
Mobilization

Advance the use
of Geographic
information to
support **Disaster
Risk Reduction**
in the Member
States.

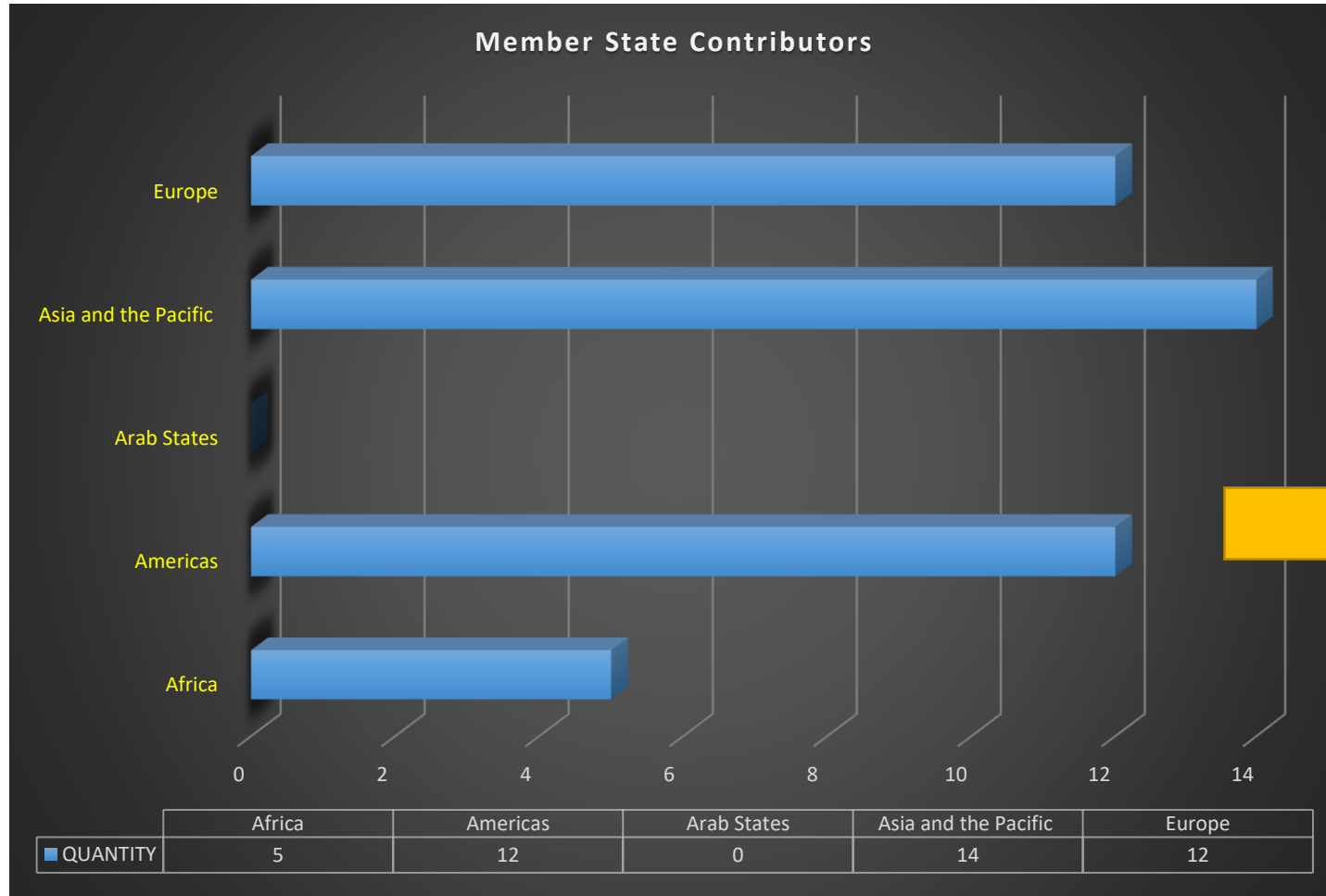
Assessment Survey Rating Scale

Category	Description
5	The initiative is fully implemented in my country
4	The initiative is currently being implemented in my country, with minor tasks still need to be done
3	The initiative is currently being implemented in my country, with major tasks still need to be done
2	The initiative is not yet implemented in my country
1	Unaware of the initiative, and its implementation in my country

Assessment Survey Structure

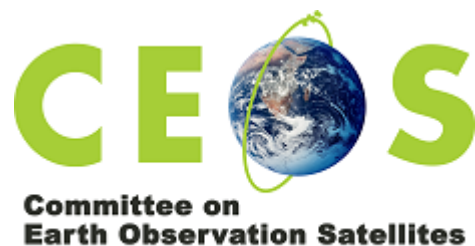
Priority Area	Focus Areas
A	1. Political Support
	2. Financial Support
	3. Champion Identified
	4. Monitoring & Evaluation Program Implemented to track Country's Progress
B	1. Geospatial information and services are translated into easily understood strategies and tools
	2. GI & Services integrated in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

Assessment Survey Respondents

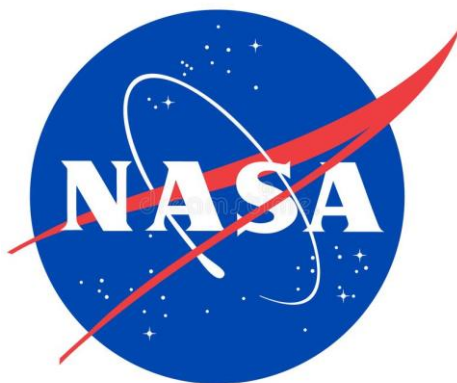


Only 3 Caribbean respondents

NB. Goal: re-administer the survey during ECLAC DRM workshop #2 (Sept 6-8, 2021)



WG Disasters



**National Aeronautics and Space Administration
(USA)**



**Disaster Risk
Reduction (DRR) WG**





UN-GGIM:Americas



CARIGEO

Caribbean Geospatial
Development Initiative

GEO-EMPOWERING THE CARIBBEAN



**“Supporting Geo-enabled DRM
within the Caribbean Region**

Partners



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



THE UNIVERSITY
OF THE
WEST INDIES



CARIGEO's PURPOSE



To improve Spatial Data Infrastructures at the national and regional levels in the CARIBBEAN

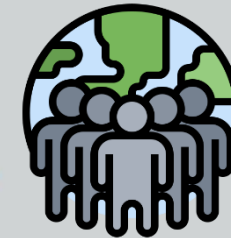
- ☐ *building on recent and on-going developments*
- ☐ *leveraging indigenous skills and resources*
- ☐ *utilising external resources and technical expertise*

Participants



**National Mapping
Agencies**

&



**National Statistical
Offices**

The Future We Want



CARIGEO
Caribbean Geospatial
Development Initiative
GEO-EMPOWERING THE CARIBBEAN



- A **community** of spatial data producers and users is **formed** and remains **active**
- GIS and data management **capacities** are **improved** across the region
- **Increased funding** is available for the creation and updating of **fundamental spatial datasets**
- Spatial data is **shared** more broadly and **more openly** in the Caribbean
- Development decisions and **policy-formulation** take more advantage of geoinformation
- **National Legislation** to regulate and promote the use of geoinformation is enacted
- **Agreements** are instituted for **collaboration** and **corporation** on the use of geoinformation regionally



CARIGEO
Caribbean Geospatial
Development Initiative
GEO-EMPOWERING THE CARIBBEAN

Caribbean GeoPortal



“

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, Esri





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Tools

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The Caribbean GeoPortal

Inspiring communities through geography

<https://www.caribbeangeoportal.com/>



CARIGEO
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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



Geospatial Tools

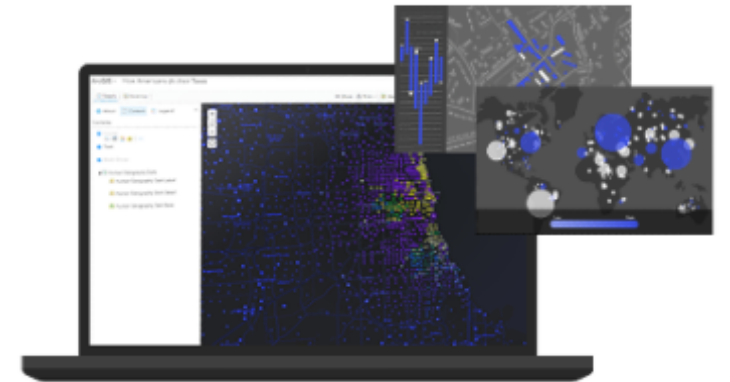
The Caribbean GeoPortal gives users access to the leading geospatial tools to easily map, analyze, and share geospatial information. Combine your data with open data, apply powerful tools, and create engaging outputs. These tools are free to use for all Caribbean GeoPortal users.

Create a web map

Quickly create maps by dropping in your spreadsheet or combining it with other location data included in the Caribbean GeoPortal. Apply smart mapping styles to make your data visually stunning.

The Caribbean GeoPortal is designed to give single users free access to the best geospatial tools. Tools are continually updated with the latest technology.

Create a Web Map



Apply spatial analytics:

- Aggregate, join, summarize, enrich
- Find, Search, Geocode
- Analyze patterns, calculate density
- Manage data - dissolve, extract, merge and overlay



Apply spatial analytics

Intuitive analysis tools help reveal relationships and outliers, and learn more about your data. Check patterns to make predictions and determine forecasts. Use location to bring data together or enrich it with new insight.

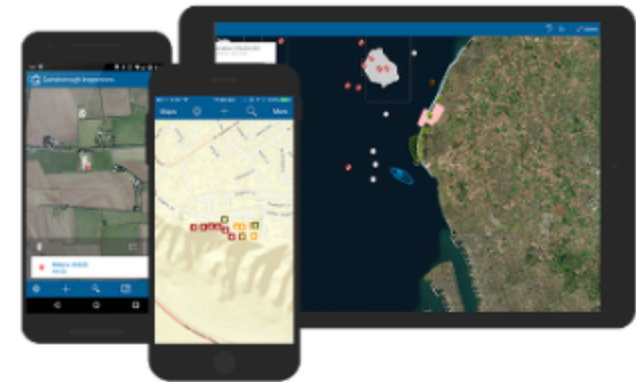
The Caribbean GeoPortal allows users to bring data together and make more informed decisions based on powerful analytics. Answer your first spatial question now.

[View all the tools](#)

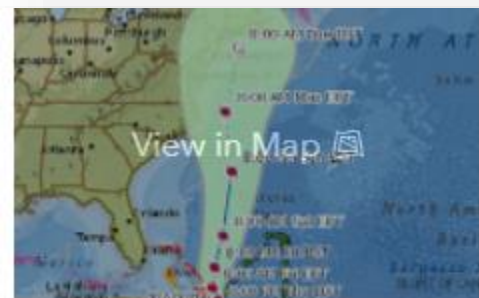
Take your work into the field

Easily collect data in the field using pre-built apps accessible on all devices. Collect location data or questionnaires via a range of tools. The apps work online and offline to ensure productivity anywhere. Collected data feeds straight back into the geospatial tools ready to map, analyze, and share.

The Caribbean GeoPortal gives users the power to work end to end. Prebuilt applications, offline navigation, and easy to configure tools allow for simple and structure data collection. Start your field work now.



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



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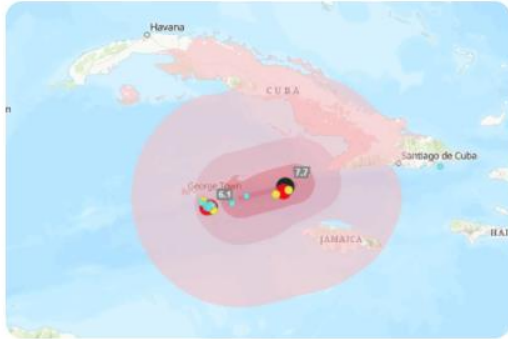
[Map](#)

[About Us](#)

Earth Observation

NASA's fleet of Earth satellites can provide a wealth of information before, during and after a disaster.





Recent Earthquakes

Authoritative

Esri Live Feeds
Caribbean GeoPortal

Summary

This service presents recent earthquake information from the USGS Prompt Assessment of Global Earthquakes for Response (PAGER) program.

In addition to displaying earthquakes by magnitude, this service also provide earthquake impact details. Impact is measured by population as well as models for economic and fatality loss. For more details, see: [PAGER Alerts](#).

Details

Map
Feature Service

August 15, 2021
Date Updated

August 15, 2021
Info Updated

August 15, 2021
Data Updated

December 13, 2019
Published Date

2,689 records



Haiti Earthquake - 7.0 Magnitude Saturday August 14, 2021

Impacted:

- Haiti, Puerto Rico, Dominican Republic, Jamaica
- Over 1200 persons dead in Haiti
- More than 1,800 people were injured and over 7,000 displaced
- Significant damage to homes, roads, and infrastructure



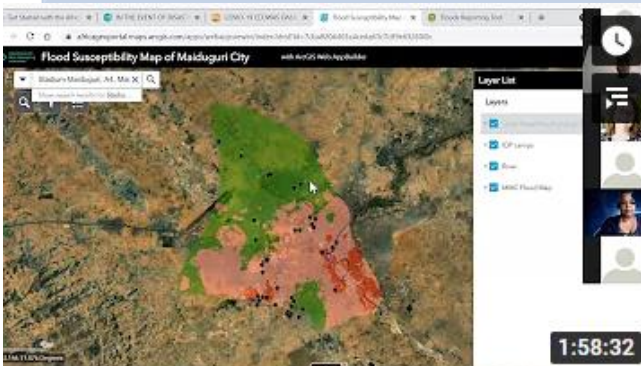
... Caribbean Geoportal Webinar series

April - September 2021

Webinar #1:
**How You Can Use the
Caribbean Geoportal**
(April 21, 2021)

Webinar #2:
**Leveraging the Caribbean
GeoPortal for Disaster Planning
and Management**
(June 22, 2021)

Webinar #3:
**Metadata, Maintenance & Best
Practices On Data Sharing**
(for data producers)
(September 21, 2021)



https://www.youtube.com/watch?v=h8-C_wNhpke



<https://www.youtube.com/watch?v=seekUoKUTIA&t=576s>



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tools available

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geospatial data

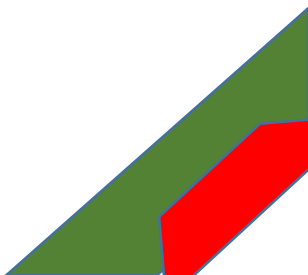
Apply geospatial tools
to analyze data and
make decisions in
response to disasters





NATIONAL EMERGENCY RESPONSE GIS TEAM

“Supporting Geo-enabled DRM within Jamaica & the Caribbean Region



Birth of NERGIST

- The vision for **Jamaica's National Emergency Response GIS Team (NERGIST)** was born out of the devastation felt after **Hurricane Ivan** in September 2004. Jamaica suffered direct and indirect damages costing \$J 35.9billion (US\$ 595,000).
- Founder and past Chairperson of the Land Information Council of Jamaica – Mrs. Jacqueline daCosta, envisioned GIS volunteers from the Land Information Council of Jamaica (LICJ) member organizations supporting the Office of Disaster Preparedness & Emergency Management's (ODPEM) efforts.
- Active since 2004 but was approved by **Cabinet on 28th June 2010**.

Response to Disasters



Hydro-meteorological:

Hurricanes, Tropical Storms & Depressions

Floods & Landslides

Drought & Bush Fires

Disease Outbreak:

Chikungunya

COVID-19



Past Local Deployments: Initial Disaster Assessment (within 48 hours)	Past Regional Deployments: CDEMA Rapid Needs Assessment Teams (RNAT) (within 72 hours)
<ul style="list-style-type: none"> • Hurricane Ivan, 2004 	<ul style="list-style-type: none"> • Hurricane Irene, Bahamas (2011)
<ul style="list-style-type: none"> • Hurricane Dean, 2005 	<ul style="list-style-type: none"> • Hurricane Mathew – Bahamas (2016)
<ul style="list-style-type: none"> • Tropical Storm Nicole, 2010 (<i>Plate 2</i>) 	<ul style="list-style-type: none"> • Hurricane Irma - Turks & Caicos (September 2017) (<i>Plate 4</i>)
<ul style="list-style-type: none"> • Hurricane Sandy, 2012 	
<ul style="list-style-type: none"> • Drought affected areas in Upper St. Andrew, 2014 	
<ul style="list-style-type: none"> • Chikungunya mapping, 2014 	
<ul style="list-style-type: none"> • Bush Fires in Upper St. Andrew, 2015 (<i>Plate 3</i>) 	
<ul style="list-style-type: none"> • May Trough Rain Floods, 2017 	
<ul style="list-style-type: none"> • Flash Flood, Montego Bay, 2017 	



Plate 2: NERGIST and ODPEM conducting Initial Damage Assessment in Savanna-La-Mar, Tropical Storm Nicole (2010)



Plate 3: NERGIST mapping bushfire extent in Upper St. Andrew (May 2015)



Plate 4: NERGIST mapping damage extent after Hurricane Irma in Turks & Caicos (September 2017)

Support for COVID-19

COVID 19 Response = Longest NERGIST deployment
(from March 16, 2020 – June 19, 2020 > 89 days)



National Emergency
Operations Centre (NEOC)

Provision of onsite and
remote mapping services
for COVID-19 cases

Generation of static
COVID-19 status maps

Conduct spatial analysis
and predictive modelling

Development and
maintenance of different
Jamaica COVID-19
Operations Dashboards

Generation of Survey 123
forms for tracking and
monitoring

Support for COVID-19

COVID 19 Response = *April 2020 - August 2021*)



Provision of onsite GIS
infrastructure
development & upgrades

Generation of static
COVID-19 status maps

GIS sensitization and
training support

Development and
maintenance of different
Jamaica COVID-19
Operations Dashboards

Generation of Survey 123
forms for tracking and
monitoring

Geospatial technical
support and problem
solving



UN-GGIM
WG Disasters



CARIGEO

Caribbean Geospatial
Development Initiative

GEO-EMPOWERING THE CARIBBEAN



NATIONAL EMERGENCY RESPONSE GIS TEAM

Thanks!