


A satellite map of a river delta, likely the Amazon, showing a complex network of waterways and green land. The map is used as a background for the entire slide.

**GEO VIRTUAL SYMPOSIUM 2022**  
GLOBAL ACTION FOR LOCAL IMPACT

# Improving Policy Relevance and Delivery of the Next GWP

5 May 2022



Sara has been leading GEO's work to advance the use of Earth observations in support of climate action by UN member countries and partners since 2019.

She has over 12 years' professional experience collaborating with UN bodies and advising governments and organisations on developing climate change adaptation policies, accessing climate finance, and participating in multilateral negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) and the Intergovernmental Panel on Climate Change (IPCC).

As a climate change advisor, she has worked with countries in the Caribbean and Indian Ocean, the Western Balkans, Central Asia, the Middle East, and Europe. She put her scientific expertise at the service of art projects, including the film anthology "Interdependence" that premiered at the Film Festival of Rome in 2019. She holds a PhD in Climate Change Science and Management from Ca' Foscari University of Venice, Italy.



**Sara Venturini**  
Climate Coordinator  
GEO Secretariat

# Meeting Protocol

- Change your name into 'Organization: Full name'
  - Example: 'GEOSEC: Hendrik Baeyens'
- Mute your audio when you don't speak
- Q&A
  - Click 'Raise hand' (recommended) or request the floor in the Chat
  - The moderator will give you the floor to ask the question verbally
  - The intervention will be directed to one or more panelists
- Comment
  - Make comments in the Chat without requesting the floor
- Poll
  - Poll will be launched during this session to get your feedback
- Be aware that the meeting will be recorded
- Twitter
  - Follow @GEOSEC2025 and use hashtags #EO4Impact



# Session overview

## Agenda

### 15:00-15:15 Introduction to the GWP Mapping report

- Introduction, **Rui Kotani** - (GEOSEC)
- Lessons learnt on survey, **Sara Venturini** - (GEOSEC)

### 15:15-15:55 Highlights and recommendations

- General scope, **Veronika Neumeier** - (GEOSEC)
- Climate Action, **Virginia Burkett** - CC WG - (US)
- Disaster Risk Reduction, **David Borges** - DRR WG - (US)
- Capacity Development, **Nancy Searby** - CD WG - (US)


### 15:55-16:15 Interaction with participants and GWP leads

- POLL: endorsement of recommendations and expression of interest for next GWP

What we expect from this session:

- Endorsement of findings/recommendations
- Insights on how GWP activities are preparing for next GWP





Rui is GEO Disaster Risk Reduction (DRR) Coordinator, being responsible for supporting GEO's DRR Working Group and relevant GWP activities while working closely with UNDRR for the Sendai Framework on DRR.

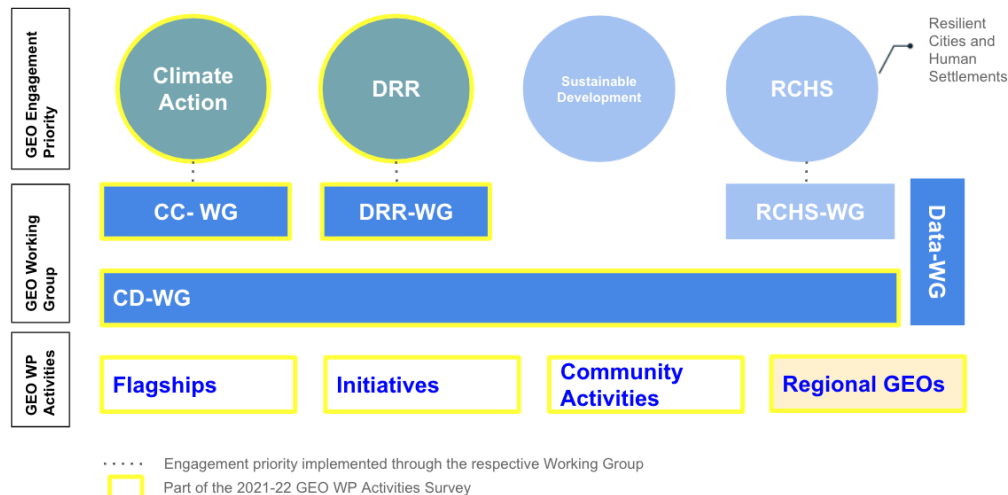
Before joining the GEO Secretariat, Rui worked for an international organization and various Japanese government agencies related to the design and the implementation of STI policies on global issues in the context of international cooperation and development aid. Namely, she served as Associate Senior Administrator at Japan Aerospace Exploration Agency (JAXA) [2020-2021]; Science and Technology Specialist for the Firm Capability and Innovation Global Practice at the World Bank [2018-2020]; Deputy Director for International Affairs in the Bureau of STI Bureau at the Cabinet Office [2015-2018]; Specialist for the Environment and Energy Division of R&D Bureau at MEXT [2012-2015], and Associate Fellow at Japan Science and Technology Agency (JST) [2006-2012]. Rui received Master of International Affairs from Columbia University.



**Rui Kotani**  
DRR Coordinator  
GEO Secretariat

# Setting the scene for the GEO Work Programme (GWP) Mapping

## Overview the mapping of GWP activities as part of the wider GEO foundational task



Cross-GEO WG collaboration over 2020-2022:

- mapping the engagement and delivery of the GWP on Climate Action, DRR, and Capacity Development

GWP Mapping Report:

- insights on the current GWP activities and their needs, gaps and synergies
- guidance to the GEO community for the next GWP 2023-2025, with recommendations for GEO leads, PB, WGs, Secretariat

# Online survey interface and participation



2020-2022 GEO Work Programme

The 2019 GEO Ministerial Summit, held in Canberra, Australia, recognized the success the GEO community has had in driving progress in sustainable development, disaster risk reduction and climate action. The Canberra declaration also resolves to enhance our efforts to help GEO members to develop institutional capacity to promote the use of Earth observations for national benefit. In 2020, new GEO working groups were established to develop strategies for advancing GEO's support to its members on priority areas and cross-cutting matters.

In order to assess gaps and future needs, the working groups are collaborating to assess the value of the current GEO Work Programme with respect to three areas: climate action, disaster risk reduction (DRR), and capacity development.

The deadline to provide input to the GEO Work Programme mapping is 31 January 2022. This will enable the working groups to collect and analyze the results and inform the next GEO Work Programme 2023-2025.

Thank you in advance for your cooperation!

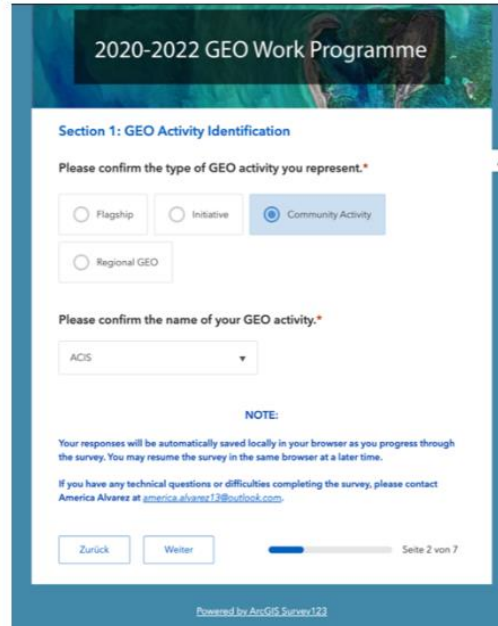
**GEO GROUP ON EARTH OBSERVATIONS**

Weiter

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Download by ArcGIS Survey123

Screenshot of the GWP mapping survey interface



2020-2022 GEO Work Programme

Section 1: GEO Activity Identification

Please confirm the type of GEO activity you represent.\*

☐ Flagship ☐ Initiative ☒ Community Activity ☐ Regional GEO

Please confirm the name of your GEO activity.\*

ACIS

NOTE:

Your responses will be automatically saved locally in your browser as you progress through the survey. You may resume the survey in the same browser at a later time.

If you have any technical questions or difficulties completing the survey, please contact America Alvarez at [america.alvarez13@outlook.com](mailto:america.alvarez13@outlook.com)

Zurück Weiter

Seite 2 von 7

Download by ArcGIS Survey123

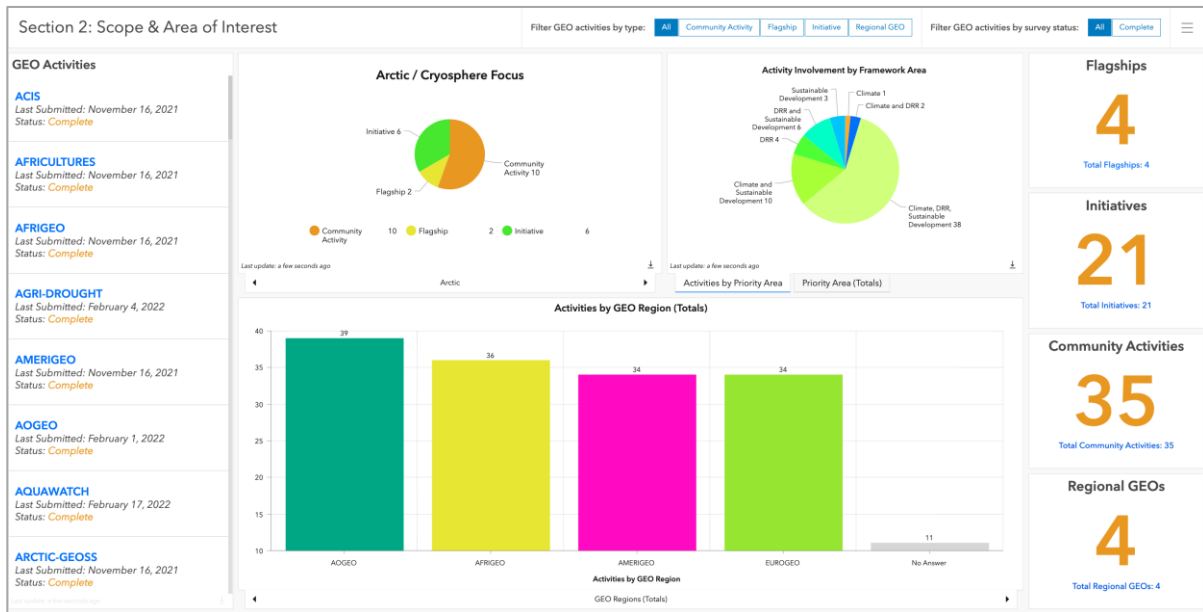
Introduction: Overview of the report and scope

- 64 GWP activities: 4 GEO Flagships, 21 Initiatives, 34 Community Activities, 4 Regional GEOs
- Technical support from USGS and Esri
- Digital survey format via Survey123 for ArcGIS
- Mapping duration: 31 August 2021 – 31 January 2022



Total of GWP activities that completed the mapping


# Lessons learnt from GWP mapping exercise + next phase



Screenshot of the GWP mapping dashboard interface

- First time online survey: high engagement and insightful data to establish comprehensive baseline overview of the GWP
- Challenges/gaps: specific options missing, data coherence
- Outputs: Dashboards, Excel Database
- Next steps with GWP: Integrating module with survey questions in online Implementation Plan form





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# Highlights and Recommendations from the GWP Mapping Report



Veronika is a Sustainability Professional with over 7 years of work experience in the Caribbean, Asia and Europe, and focuses on Climate Policy, SDG action and public-private collaboration. Veronika is supporting the GEO Secretariat and the Climate Change Working Group as Climate Change Consultant.

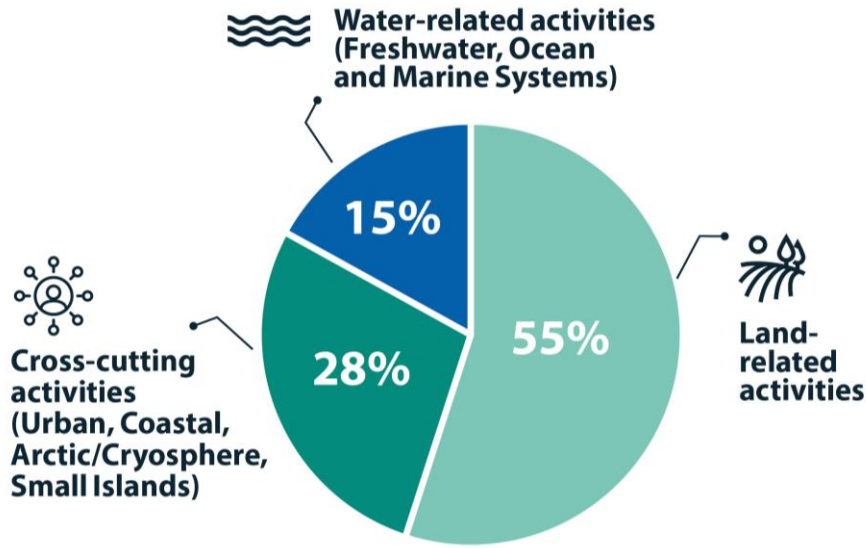
She is the Founder of Vision Analytics. She holds a MSc in Geography by FSU Jena, and a MSc in International Management by VU Amsterdam, and worked at the Helmholtz Association for Environmental Research (iDIV), and the World Business Council for Sustainable Development (WBCSD).



**Veronika Neumeier**  
Climate Change Consultant  
GEO Secretariat

# Thematic domains - land-related activities are the most addressed across the GWP

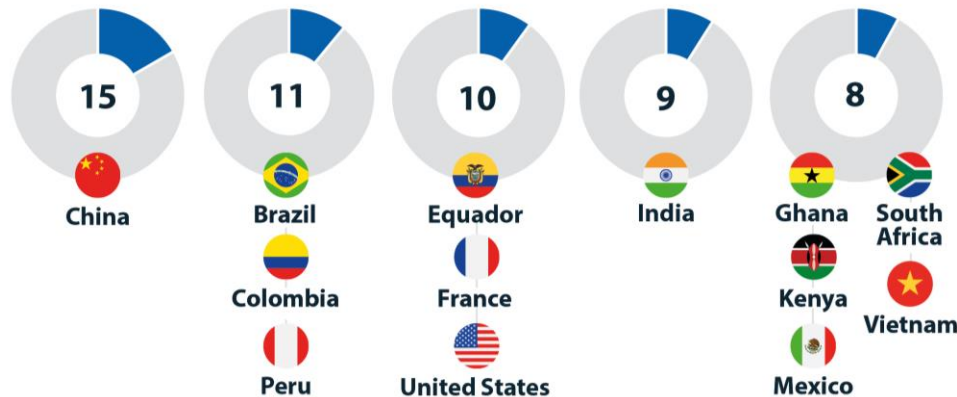
## Overview of GWP activities per thematic domains clusters



- Most addressed: Urban Areas and Cities / Settlements (35), Croplands (33), Coastal Zones (32), Freshwater (32), and Land (32)
- Least addressed: Arctic /Cryosphere (18) and Small Islands (18)

# Geographies – GWP activities have primarily regional and global impact

## Most cited countries for national engagement by GWP activities



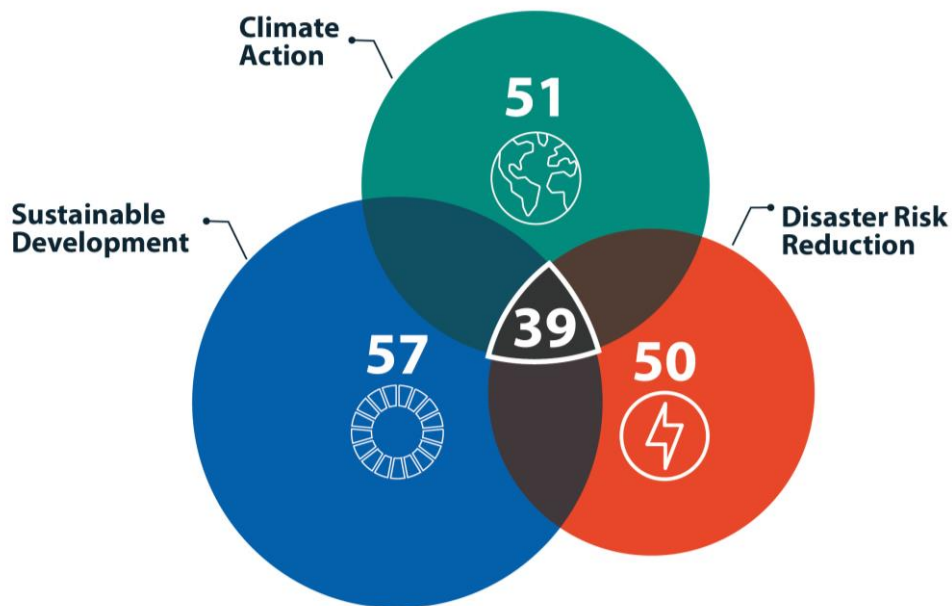
GWP activities operate and have impacts across all geographies:

- Primarily regional (over 84%) and global (over 80%)
- Subregional and national (over 50%)
- Local (around 35%)
- Gap: Concrete examples of ongoing cooperation with national governments on implementing EO data and products for decision making



# Policy drivers – strong overlap exists across global agendas

## GWP activities supporting global policy drivers



- High levels of engagement: all GWP activities address at least one policy driver across Sustainable Development (almost 90%), Climate Action (80%) and DRR (78%)
- Strong overlap: over 60% GWP activities contribute to all three policy drivers
- Resilience building, adaptation and loss and damage are intrinsic cross-cutting elements



# General scope - recommendations



## Thematic domains

- Prioritize **Arctic/Cryosphere and Small Islands** that entail cross-cutting EO activities between land and water (e.g. SIDS, Arctic Council)
- Leverage the strengths of **existing water-related activities**, to bring relevant initiatives together and capitalize on knowledge and products.



## Geographical impact

- Identify concrete targets for **on-the-ground implementation and collaboration with user communities** for user uptake, particularly national governments and business sectors



## Global policy drivers

- Deliver **EO data, knowledge and products** that directly support global policy agendas
- Revise the **selection criteria of GWP activities** to align more closely with global policy agendas and GEO engagement priorities



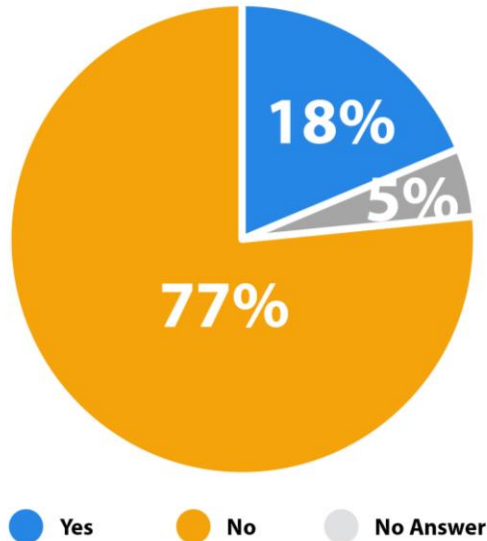
Virginia is co-chair of GEO's Climate Change Working Group. She is the Chief Scientist for Climate and Land Use Change at the U.S. Geological Survey. She served as Chief Scientist for Global Change Research at the USGS (2006-2014), USGS Associate Director for Climate and Land Use Change (2015-2017) and Chair of the U.S. Global Change Research Program (2017-2019). Dr. Burkett has published extensively on the topics of global change and low-lying coastal zones. She was as a Lead Author of the United Nation's Intergovernmental Panel on Climate Change (IPCC) Third, Fourth and Fifth Assessment Reports and the IPCC Technical Paper on Water. She was a Lead Author of the First, Second, and Third U.S. National Climate Assessments and served on the Federal Steering Committee for NCA4 (2018).



**Virginia Burkett**  
Chief Scientist for Climate and Land Use  
Change,  
United States Geological Survey  
CC-WG Co-chair

# Climate action is a top priority across the GWP but link to international climate policy can be improved

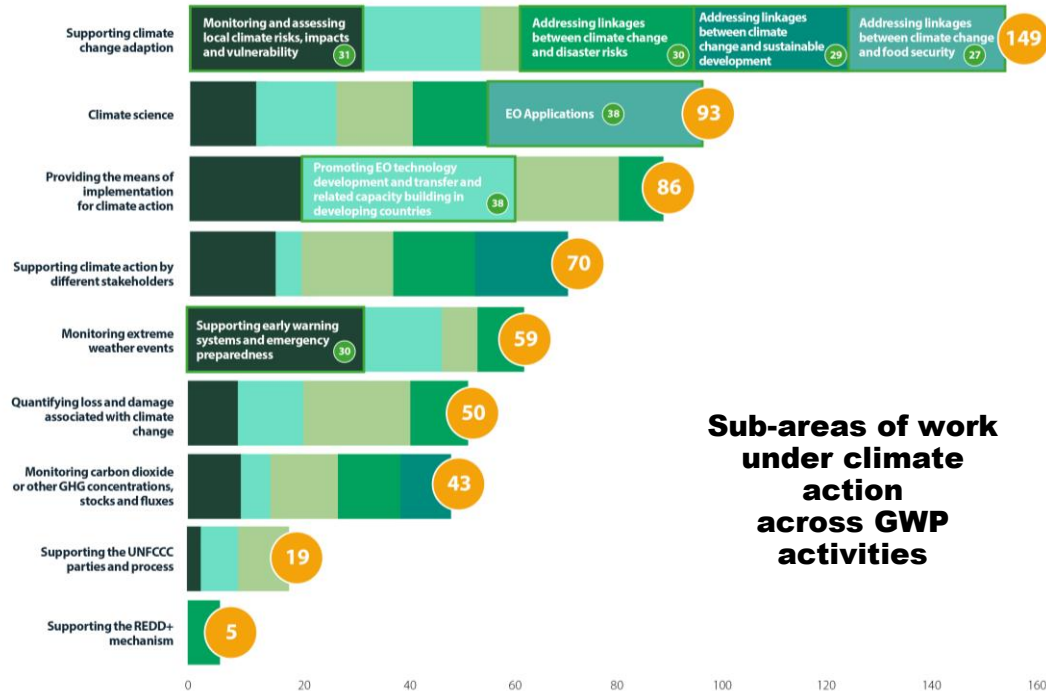
**GWP activities providing input to UNFCCC and Paris Agreement**



- 51 activities (about 80%) focus on climate action across the GWP
- However only **12 GWP activities (18%) provide input to the UNFCCC and Paris Agreement**, and only 6 GWP activities (about 10%) collaborate with UNFCCC national focal points in countries of GEO activity operations
- Few GWP activities (about 17%) currently support IPCC process and assessments
- Collaborations on climate within GEO are predominantly driven by space agencies and UN agencies (e.g. WMO, UNEP)



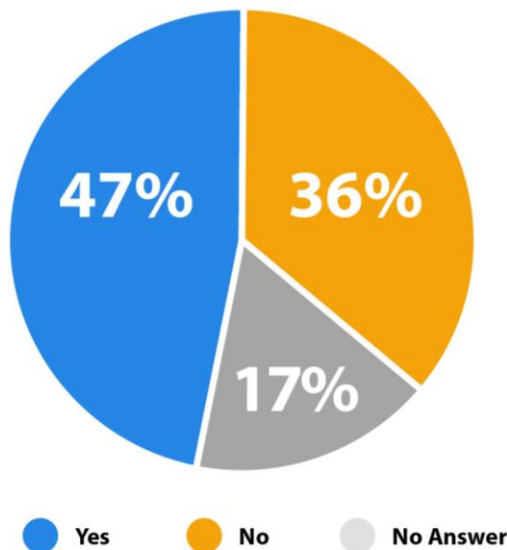
# GWP is strongly aligned with Paris Agreement workstreams – Adaptation is the most addressed but delivery needs improving



- More numerous but less mature/less operational activities on Adaptation (50), Means of Implementation (43), Loss and Damage (41)
- Fewer Mitigation activities including REDD+ (37) but provide more concrete contribution
- GWP activities mostly involve:
  1. climate science and developing EO applications
  2. promoting EO technology development and transfer and capacity building in developing countries
  3. monitoring and assessing *local* climate risks, impacts and vulnerability
  4. supporting early warning systems and emergency preparedness

# GWP activities suitable to integrate EO into National Adaptation Plan (NAP) processes

**Suitability of GWP activity contributions for EO guidance on NAP**



High number of GWP activities work in the domain of climate adaptation, about 50% state **suitability of work/contributions for supplementary technical guidance for developing countries to integrate EO into NAP processes**

- Key sectors for supplementary technical guidance: agriculture, food security, land (6); marine, coastal and riverine hazards (4); urban areas (3); renewable energy (2); health (2); industrial applications (1); and mountains (1)
- Creating leverage: focus on data to address multiple sectors or topics (6) and on-the-ground implementation through local and regional partners (4)



# Climate Action - recommendations



Provide input to international **climate policy and science processes**:

- Identify and establish collaboration with relevant **UNFCCC and IPCC national focal points**, especially through national and local GWP activity partners.



Build on GWP strength around **resilience** which cuts across global policy agendas:

- Develop or improve **tools, services and methodologies** that contribute to **Adaptation and Loss and Damage**, notably knowledge products targeting **support to developing countries for NAPs** while continuing to provide EO needed for climate science.




Enhance EO needed to support **climate finance** decisions to implement the Paris Agreement:

- Focus on supporting businesses and financial institutions in **climate risk assessments**, as well as supporting LDCs and SIDS in improving the **climate rationale of project proposals for adaptation and mitigation** with EO data.



Seek opportunities for **collaboration** with other GWP activities, Regional GEOs and CC-WG:

- Focus on **nexus areas** to develop an integrated approach to address **climate change impacts across key sectors**, such as climate-health-cities, climate-energy-infrastructure, climate-ocean-biodiversity.



David is a Physical Scientist with the NASA Earth Applied Sciences Disasters Program at NASA Langley Research Center. He provides international project management and geospatial analytics solutions to disaster related issues on a global scale through application development and geospatial enablement of Earth observation information.

He is also an active member of the UNDRR Global Risk Assessment Framework (GRAF) WG and UN-GGIM WG-Disasters. Before joining NASA, David spent ten years in the private sector supporting a variety of clients, including the U.S. Federal Emergency Management Agency (FEMA) and Department of Homeland Security (DHS).

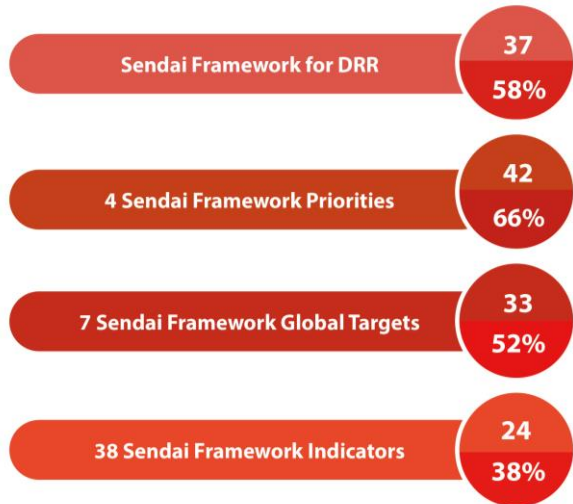


**David Borges**  
Physical Scientist, NASA  
Langley Research Center  
GEO DRR-WG Co-Chair



# GWP is strongly aligned and supports the Sendai Framework for Disaster Risk Reduction 2015-2030

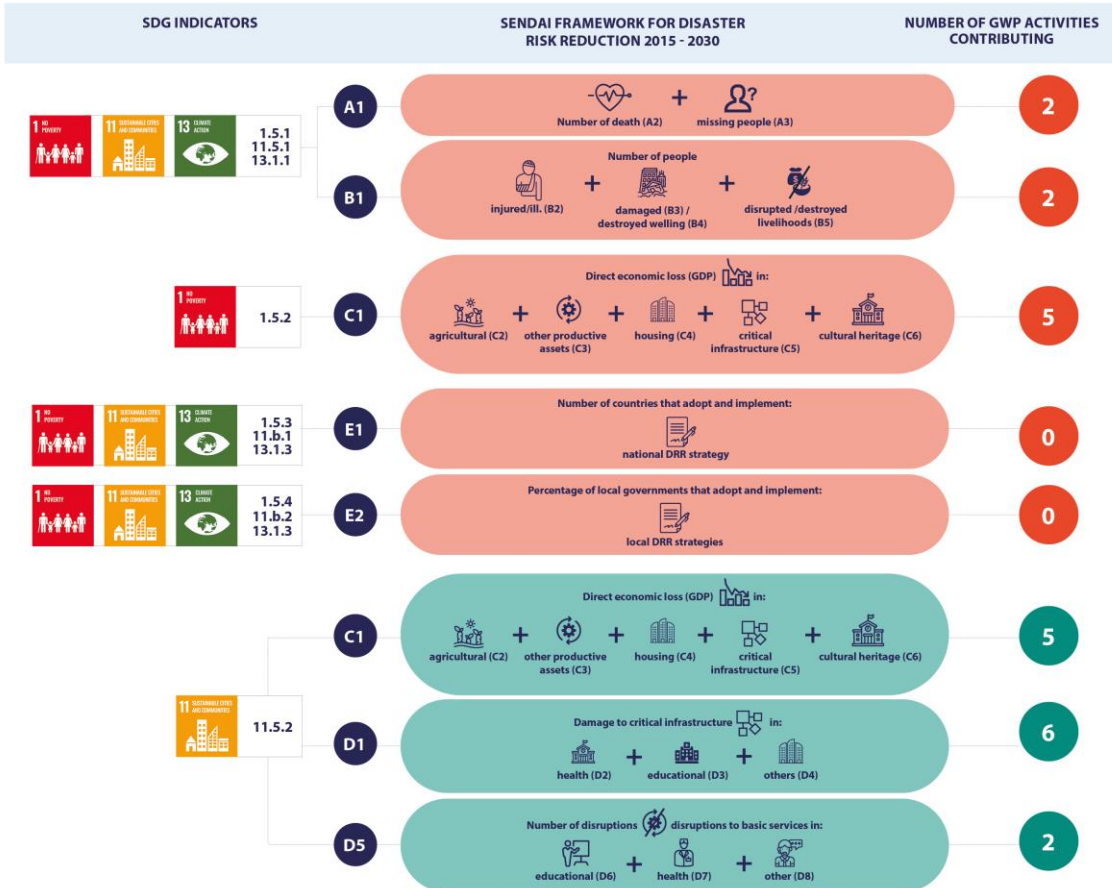
Indicated relevance across key elements of the Sendai Framework by the GWP activities



GEO activities directly supporting one or more of the 7 Sendai Framework Global Target



## Overview of SFDRR/SDG Common Indicators

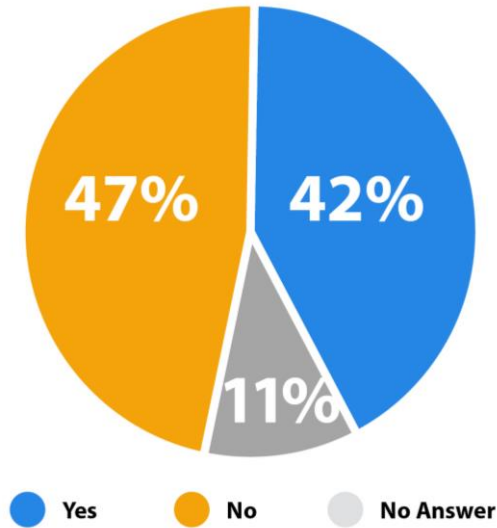


**Low engagement on reporting the SFDRR/SDG common indicators across GWP activities**

- Only 15 GWP activities (23%) are working on one or several Sendai Framework/SDG common indicators

## Limited engagement with National Disaster Risk Reduction Partners across the GWP

**GWP activity working with DRR practitioners or DRR institution/agency in the country**



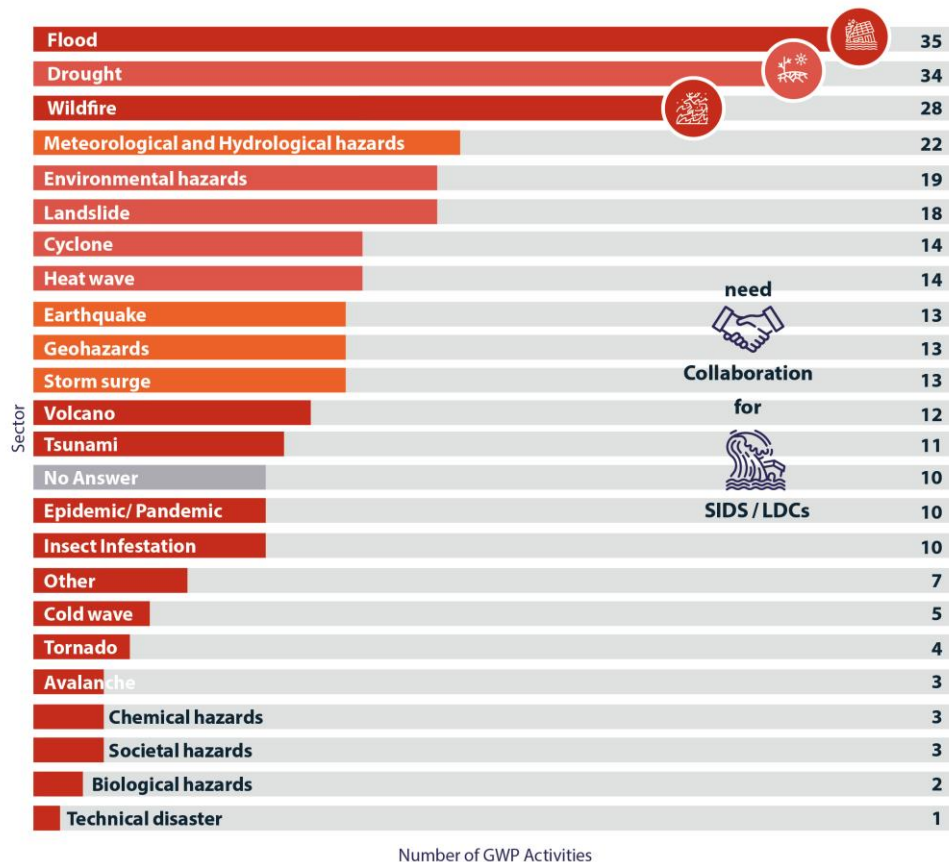
- Currently, nearly 60% of the GWP activities have no or limited connections with users, especially at the national level
- **National DRR government agencies:** 14 GWP activities work with relevant national DRR agencies
- **Sendai Framework National Focal Points:** Out of this 14 GWP activities, only 2 confirmed relationship with the specific Sendai Framework National Focal Point

# GWP is well positioned to respond to critical DRR areas: climate change-induced hazards and Early Warning Early Action (EWEA)

- Top 3 DRR thematic areas among the GWP activities were flood (35), drought (34) and wildfire (28)
- 34 GWP activities (53%) cover “preparation/early action” in pre-impact phase of disaster management risk (e.g. detecting hazardous events, such as a tropical cyclone, drought-induced famine, wildfire)

Highlights: Disaster Risk Reduction

## Thematic DRR areas addressed by GWP activities







## Disaster Risk Reduction - recommendations



Engage with **DRR focal points and users**:

- Establish collaboration with at least one specific **national stakeholder for DRR**, such as Sendai Framework national focal points and civil protection agencies.




Support the **implementation** of the Sendai Framework:

- Develop or improve **tools, services and methodologies** that contribute to **specific Sendai Framework Targets and Indicators**, notably on Early Warning (Target G) and SFDRR/SDG common indicators.



Seek opportunities for **collaboration** with other GWP activities, Regional GEOs and CC-WG:

- Focus on **nexus areas** to develop an integrated approach to address increasingly systemic nature of disaster risk where events overlap and interplay with **multiple risk** drivers.



Nancy is co-chair of GEO's Capacity Development Working Group (CD WG) and the Inter-American CD WG for AmeriGEO. She manages the NASA Headquarters Earth Science Applied Sciences Capacity Building Program in Washington DC, USA. Nancy champions applying Earth Science information to decisions and actions by everyone across society including indigenous communities. Through training, feasibility projects, prizes and challenges, and services co-development and programs called ARSET, DEVELOP, and SERVIR, the program strengthens individual and institutional capacity to use Earth Science information. She works in the United States, in and through regional networks in Africa, Asia, and Latin America, and globally to improve disaster resilience, biodiversity and ecosystem sustainability, water resources management, public health surveillance, and food security and sustainable agriculture. She participates in the Committee on Earth Observation Satellites' WG on Capacity Building and Data Democracy and is one of the co-founders of the Earth Observation Training Education CD Network. She received the GEO Individual Excellence Award in 2020. She holds a PhD in Mechanical Engineering from Stanford University.



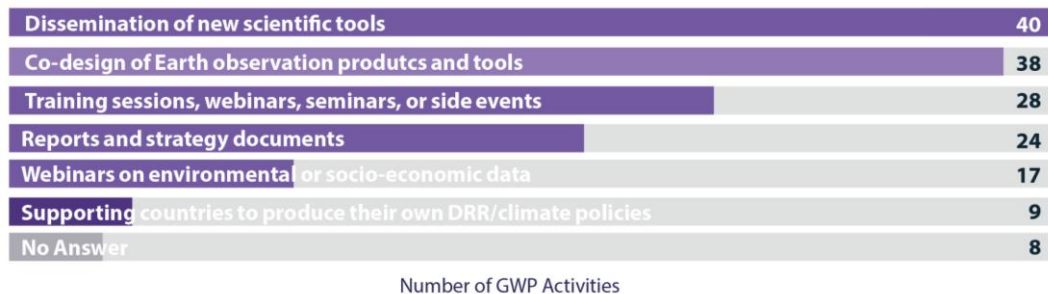
**Nancy D. Searby**  
NASA Capacity Building Program Manager  
GEO CD WG Co-Chair

# Capacity development is cross-cutting and key to enabling use of EO in climate, DRR, and across all GWP activities



- However, 19 GWP activities indicated that they have no collaboration in place or link at all

## Typologies of capacity development activities currently carried out by GWP activities

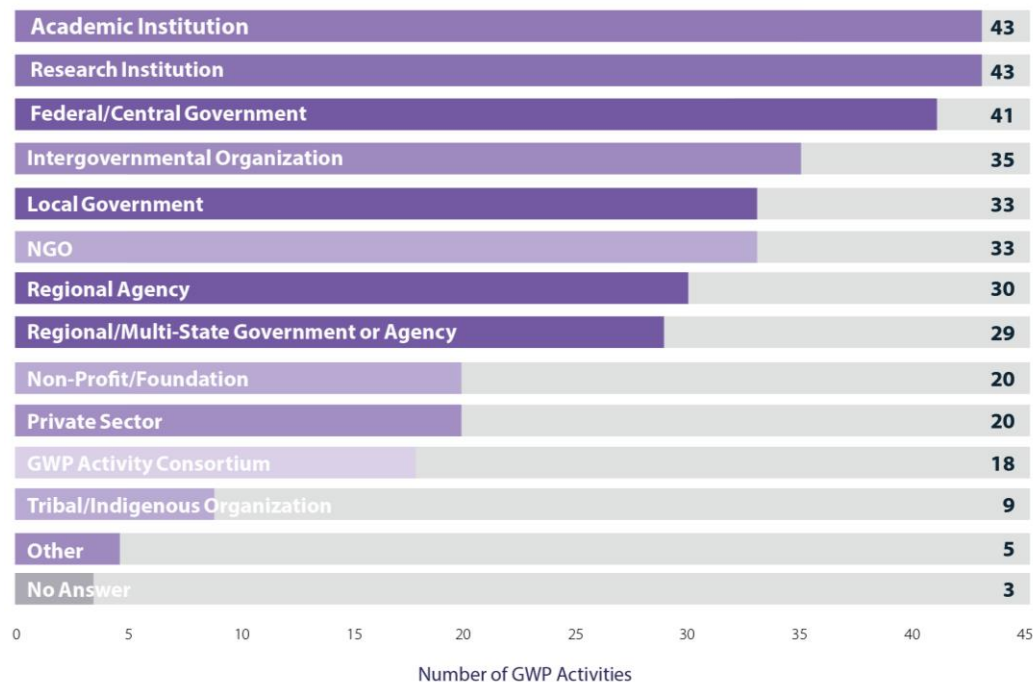


- **Typology of activities:** Dissemination of new scientific tools and co-design of EO products and tools are the most popular across the GWP
- **Dissemination channels and languages:** GWP activities tend to rely on traditional channels of dissemination (websites, geospatial portals, and social media) - the customization of content using national/local languages seems critical

# Research and academic institutions are the most common target users for capacity development resources across the GWP

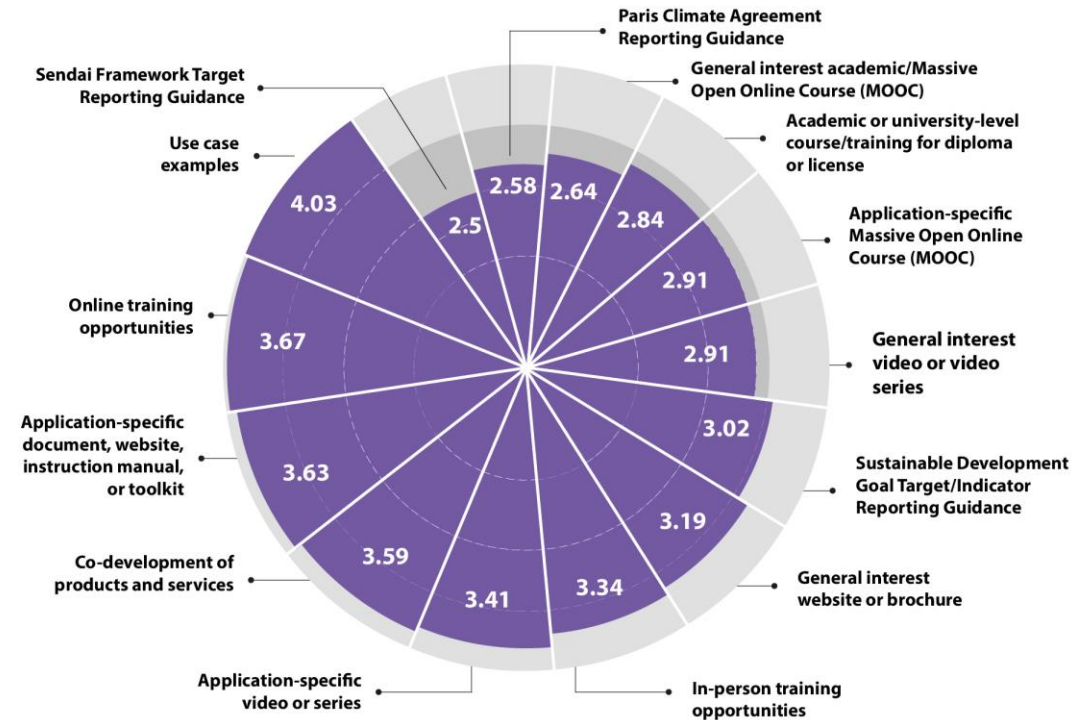
NGOs, Private sector, GWP Activity Consortia and Tribal/Indigenous organizations are not a prime target user yet.

Target users for capacity development resources across the GWP





## Recommended forms of EO capacity development delivery



**Use cases are considered the most effective method of delivering capacity development to be adopted across the GWP in the future**



## Capacity Development - recommendations



Consider “**capacity sharing**” for more inclusive and culturally sensitive terminology and practices:

- Support side events and other initiatives for sharing of current resources and good practices, as well as fostering diverse and inclusive engagement with under-represented user groups, such as tribal and Indigenous communities.




Capacity development **strategies and plans** for GWP activities:

- Tailor tools and resources to current **target users** and consider strategies for including and engaging with less targeted user groups, alongside strategies for strengthening **effective dissemination and delivery**.



Share and re-use **existing resources**:

- Make available an **inventory of capacity development resources**, potentially as a function of the GEO Knowledge Hub, whereby existing resources can either be modified or repurposed, or serve as an example of good practices.



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# Interactions with participants and GWP leads



## Poll:

- Endorse and prioritize recommendations
- Express your interest in participating in the 2023-2025 GWP

Feel free to intervene with questions and comments