

GEO Disaster Risk Reduction Working Group Roadmap

This document is submitted by the Disaster Risk Reduction Working Group to the Programme Board for information.

1 INTRODUCTION

A roadmap is proposed to guide the work of the Disaster Risk Reduction Working Group (DRR-WG) and prioritize action based on the previously approved [Terms of Reference](#). The roadmap will also outline how members will engage and contribute to the objectives of the DRR-WG.

The roadmap assumes that all activities, where possible, will establish and maintain relationships with national, international and intergovernmental bodies acting on disaster risk reduction, including the United Nations Office for Disaster Risk Reduction (UNDRR), as well as considerations around the [Canberra Declaration](#) and the GEO Strategic Plan.

2 WORKING GROUP DUTIES AND DELIVERABLES

The duties identified in the DRR-WG terms of reference may be grouped into three categories based on whether they focus on the GEO Work Programme, supporting action by countries and the Sendai Framework, or on other international policy instruments. The expected deliverables identified by the DRR-WG are mapped against these three categories of duties in Table 1 below.

Table 1: Disaster Risk Reduction Working Group Key Deliverables

Duties from DRR-WG ToR	Deliverables
Duties related to the 2020-2022 GEO Work Programme	<ul style="list-style-type: none"> ▪ Identify resources (financial and in-kind) to support GEO disaster-related initiatives. ▪ Promote, including through good practice, sharing of data and knowledge to improve DRR. ▪ Foster participation of public stakeholders in GEO (DRR) initiatives. ▪ Enable discussion and communication on disaster-related activities within the GEO Work Programme. ▪ Promote the sharing of data from different platforms, technologies, themes and domains. ▪ Connect different scales of activities – from local, national, regional to global. ▪ Support GEO Week (Plenary) including DRR session.
Duties related to supporting country action and the Sendai Framework	<ul style="list-style-type: none"> ▪ Monitor the uptake of GEO’s activities in support of the Sendai Framework. ▪ Promote to key stakeholders and partners the value of Earth observations and information provided by GEO. ▪ Act as a focal point, where appropriate, for the engagement with external stakeholders and international organizations and processes relevant to the Sendai Framework.

Duties from DRR-WG ToR	Deliverables
	<ul style="list-style-type: none"> ▪ Review the implementation plans of all GEO Work Programme activities relevant to the Sendai Framework for disaster risk reduction, and to identify potential gaps and synergies. ▪ Stimulate the initiation of projects, case studies or pilots involving participants from multiple GEO Work Programme activities to enhance collaboration across GEO and to address identified gaps.
Duties related to other international policy instruments (GEO's engagement priorities)	<ul style="list-style-type: none"> ▪ Seek coherence and collaboration amongst the post-2015 development agendas (UN 2030 Agenda and Paris Agreement) and GEO's focus areas, including identification of common metrics and opportunities for joint reporting.

3 WORKING ARRANGEMENTS

3.1 Co-chairs

Three co-chairs selected by and from the DRR-WG members, representing a balance of gender, geography, and generation. Each co-chair leads a designated subgroup and is supported by deputy chairs in their role.

3.2 Subgroups

Three subgroups have been established:

- DRR-WG coordination across GEO Work Programme;
- UNDRR coordination for Sendai Framework Priorities; and
- Climate Change and SDGs coordination.

3.3 Meetings and Communication

Work mainly through conference calls and emails as determined by DRR-WG members:

- One DRR-WG call every 3 months;
- Subgroups calls on ad hoc basis and/or monthly basis;
- One physical meeting/workshop per year;
- Additional meetings at industry events; and
- Share information and ideas via mailing list.

The Working Group will provide periodic (at least annual) reports on its activities to the Programme Board as part of GEO Work Programme monitoring. It may also bring specific issues to the Programme Board as needed.

Administrative support to DRR-WG will be provided by the GEO Secretariat; currently Steven Ramage, Head of External Relations sramage@geosec.org.

3.4 Duration

The Terms of Reference will remain in effect for the period of the 2020-2022 GEO Work Programme. They may be revised with the approval of the Programme Board.

Annex A

Current Governance of the Disaster Risk Reduction Working Group

SUBGROUP 1: DRR COORDINATION ACROSS THE GEO WP 2020-2022

Co-chair: David Borges (United States).

Deputy chairs: Godstimes James (Nigeria), Fernando Belda (Spain), Tatiya Chuentragun (Thailand).

SUBGROUP 2: UNDRR COORDINATION FOR SENDAI FRAMEWORK DISASTER RISK REDUCTION STRATEGIES AND GLOBAL ASSESSMENT

Co-chair: Janet Edwards (Sweden)

Deputy chairs: John LaBrecque (IUGG), Aliyu Abdullahi (ACCREC)

SUBGROUP 3: CLIMATE CHANGE AND SDG COORDINATION

Co-chair: Kene Onukwube (Nigeria)

Deputy chairs: Cheila Cullen (United States), Ramesh Singh (United States), Ghulam Rasul (ICIMOD)

Annex B

Subgroup Work Plans

SUBGROUP 1: DRR COORDINATION ACROSS THE 2020-2022 GEO WORK PROGRAMME

Background

Starting in December 2018, the GEO Programme Board led an inclusive and iterative process to develop the 2020-2022 GEO Work Programme. This Work Programme was approved at the GEO-XVI Plenary, 6-7 November 2019 in Canberra, Australia. The current Work Programme contains more than 60 individual activities, organized thematically and geographically. Many of these Work Programme activities include elements of Disaster Risk Reduction (DRR), considering that one of GEO's Engagement Priorities is the UNDRR Sendai Framework for Disaster Risk Reduction. However, there was no overarching coordination body to facilitate internal communication regarding DRR activities or effectively communicate the 'State of DRR' within GEO to all stakeholders. The GEO DRR WG Subgroup 1 (SG₁) fills this role.

SG₁ Purpose

The DRR WG was created to develop and implement a coherent and crosscutting approach within GEO to advance the use of Earth observations (EO) in support of countries' disaster risk reduction and resilience efforts. These efforts include those related to the provisions of multilateral agreements such as the provisions in the Sendai Framework for Disaster Risk Reduction. In this way, the WG will support the translation of the Canberra Declaration into concrete actions within the GEO Work Programme. SG₁ will lead coordination activities of DRR-related activities across the GEO Work Programme, and work to improve the GEO community's ability to reduce disaster risk.

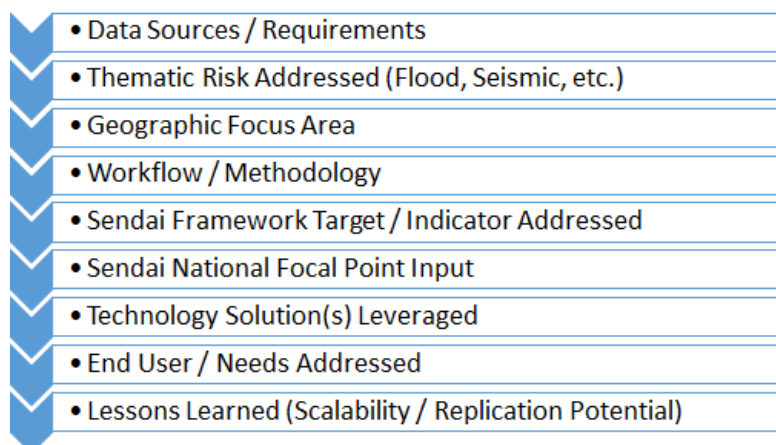
Key Activities / Deliverables

- I. DRR WG Subgroup 2 (UNDRR Coordination) and Subgroup 3 (Climate Change and SDG Coordination) require a foundational and comprehensive understanding of DRR activities across the GEO Work Programme. A primary responsibility of SG₁ will be to provide these resources to ensure the success of the other Subgroups.
 - A. Determine relevant criteria for GWP activities that address DRR.
 - B. Create a survey that will capture relevant DRR-related activities across the Work Programme and distribute to WP Activity Leads and GEO Members.
 - C. Use survey results to create a resource/database, to be shared on the GEO website, that represents the subset of the entire GWP that addresses DRR.
- II. Develop "GEO Sendai Toolkits" in partnership with SG₂ and SG₃. This toolkit concept will integrate existing efforts within GWP, providing coordinated and sustained information about the use, relevance, and access to Earth observations for Sendai Framework policy and actions. It will be guided by and address documented national level stakeholder requirements (for example, Sendai national focal points). It will leverage relevant technology solutions (GEO Knowledge Hub, open source geospatial, etc.) that are informed by expert communities (for example, Committee on Earth Observation Satellites WGDIsasters) and established global frameworks (for example,

UN-GGIM WG-Disasters Strategic Framework on Geospatial Information and Services for Disasters). Integration with established Sustainable Development Goals (SDG) and Climate Change efforts within GEO (for example, EO SDG Toolkits) will also be a priority and led by SG3.

- A. Develop “GEO Sendai Toolkits” Concept Paper (WG-wide deliverable)
 - B. Determine an initial example WP activity, that can be developed and leveraged as a use case / example of this concept.
 - C. Work directly with GEO Data WG to close gaps between DRR activities and GEO data developments, for example, the evolution of the GEO Knowledge Hub.
- III. Promoting awareness of related and complementary DRR activities across thematic and geographic Work Programme activities to facilitate integration is another primary objective.
- A. Determine specific methods - input required. Example: Hold thematically focused meetings at GEO events that bring together similar activities such as flood-focused work in different Regional GEOs.
- IV. Identify resources (financial and in-kind) to support GEO disaster-related initiatives.
- A. Work with GEO Secretariat and resource mobilization team.
- V. Foster participation of public stakeholders in GEO (DRR) initiatives.
- A. Work with GEO Secretariat on communications campaign.
- VI. Support GEO annual meetings and related activities by planning and hosting DRR-focused side events.
- A. Develop a 2021 calendar of relevant DRR events (GEO Data and Knowledge Week, GEO Symposium).
 - B. Organize and host DRR Side Event at GEO Week 2021.

GEO Sendai Toolkits: Example Case Study Workflow



Timeline

The DRR WG, per the Terms of Reference, will remain in effect for the period 2020-2022. The SG1 Team will establish a detailed timeline regarding SG1 Key Activities and Deliverables.

Periodic reporting schedule needs to be determined (to inform annual DRR WG Report to GEO Programme Board).

Deliverables Timeline will be developed in the form of a SG1 Gantt chart available on the DRR WG Share Drive.

Subgroup Governance

Co-Chair and Deputies:

David Borges, NASA, DRR WG Co-Chair, SG1 Lead

Tatiya Chuentragun, GISTDA, Deputy Chair SG1

Fernando Belda, AEMET, Deputy Chair SG1

Godstime James, NASRDA, Deputy Chair SG1

Subgroup Members

Mijail Arias-Hidalgo, ESPOL, Ecuador

Stuart Marsh, University of Nottingham, UK

Stella Melo, Environment and Climate Change Canada, Canada

Nurfashareena Muhamad, SEADPRI-UKM, Malaysia

Bandela Ajay Kumar, INCOIS, CEOS

Krystal Azelton (Wilson), Secure World Foundation

Albert Anoubon Momo, Trimble

Paul Box, CSIRO

Working Arrangements

SG1 activities will primarily occur through conference calls and email communications until physical meetings commence again. The entire DRR WG will hold meetings quarterly. SG1 will also meet quarterly (ideally the week before DRR WG meetings). At least one physical meeting should be expected annually (perhaps during GEO Week). Additional SG1 physical meetings can be planned during existing related conferences/workshops (Regional UNDRR meetings, EGU, AGU, Understanding Risk, etc.).

SUBGROUP 2: UNDRR COORDINATION FOR SENDAI FRAMEWORK PRIORITIES

Purpose of Subgroup 2

The purpose of Subgroup 2 is to use the combined resources in the group to promote the dissemination and use of Earth observation data. This will strengthen capabilities to reduce disaster risk according to the needs of countries as identified by United Nations Office of Disaster Risk Reduction (UNDRR) or the countries themselves. Subgroup 2 will work together with Subgroups 1 and 3 for various activities in the work plan. The members of the Subgroup 2 will also collaborate with other GEO related international groups to achieve the best results for the deliverables.

Key Activities and Deliverables

Focus Area 1 Increase the use of earth observation data by national Sendai Focal Point agencies for achieving the Sendai Framework's Global Target E

The Global Target E of the Sendai Framework for Disaster Risk Reduction 2015-2030 is: Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020. There are two global indicators:

- E -1 Number of countries that adopt and implement national disaster risk reduction strategies in line with the SFDRR.
- E-2 Percentage of local governments that adopt and implement local disaster risk reduction strategies in line with national strategies.

Activity 1.1

Assessment of the current state to understand how many GEO members use EO data for addressing related disasters and what level of use there is and for what purpose. A baseline scenario about the current usage of EO in DRR/DRM activities will be described.

Review the current EO data usage for DRR strategies by national level GEO members. In coordination with UNDRR, include an assessment of those GEO members that are working on Global Target E to learn how EO could be useful. Carry out (with UNDRR) an analysis of the factors that prevent progress, especially concerning EO data and risk information for DRR strategies. Identify gaps in risk information and analyse. Describe what is missing to fill them, for example, new EO missions, better access to data, better access to infrastructures for data processing, etc.

Deliverable 1.1 A report with support from UNDRR that includes a summary of national/regional EO usage for DRR strategies and disparities by national level GEO members. It will also include an analysis of the factors that prevent progress, especially concerning data and risk information for DRR strategies. The report will provide recommendations.

Activity 1.2

Describe how EO can aid in creating disaster loss data that can be useful for DRR strategies. This activity will be conducted in cooperation with GEO Community Activity EO4Sendai Monitoring since their mission in part is to promote the use of EO data for reporting on the global indicators in the Sendai Monitor.

Deliverable: 1.2: Description of how EO can aid in creating disaster loss data that can be useful for DRR strategies.

Focus Area 2: Showcase how EO can be used to describe and visualize vulnerability and exposure.

Activity 2.1

Explore ways of using EO to represent and define vulnerability and exposure, taking into consideration different stakeholders' /users' perspectives including the importance of social, economic, environmental interactions. Consider data and model uncertainties as well as decision making needs.

Deliverable 2.1 A summary of different stakeholders'/users' perspectives on vulnerability and exposure and decision-making needs.

Activity 2.2

Explore the idea of creating consortia that have their own data and means of distributing it. The first activity could be an online consultation. For what purpose or goal do governments need the data? What information gaps are there for prevention and preparedness that could be filled with EO? What is possible to achieve for DRR strategies and plans with this data? What are common perceptions and misperceptions of the EO community from a disaster risk management perspective and vice versa? This activity will be accomplished together with GEODESY4Sendai and ISC World Data System, a GEO Participating Organization, as well as with industry, such as Munich Re, Swiss Re and other insurance and reinsurance companies.

Promote the use of packages of data that are available for national disaster risk reduction strategies and plans. The package(s) to be described by Subgroup 1 as one of their work plan activities.

Deliverable 2.2 A summary document of the online consultation about data consortia. It should describe for what purpose or goal governments need the data 2) information gaps in prevention and preparedness that could be filled with EO 3) what is possible to achieve for DRR strategies and plans with this data 4) common perceptions and misperceptions of the EO community from a disaster risk management perspective and vice versa.

Activity 2.3

Describe how to combine different data sources for more effective activities for disaster risk reduction, including visualising vulnerability and exposure. This activity will be done in cooperation with Subgroup 1.

Deliverable 2.3 An easy-to-understand document for decision makers in government that describes how to combine different data sources for more effective disaster risk reduction, including vulnerability and exposure.

Activity 2.4

Find good examples of the use of data to show vulnerability and exposure and the benefits. Include relevant international data sharing protocols, data format standards. Geospatial experts within the subgroup 2 can conduct case study research on the usage of EO data to address related issues such as flooding and drought. A case study of one country or one region/county/state within a country. The result of the case study will be available for the authority where the Sendai Framework Focal Point is employed. This is a joint activity for SG1, SG2 and SG3. The activity can be done in cooperation with ISC CODATA, a GEO Participating Organization or any other interested parties.

Deliverable 2.4 Summary of case studies on how to use EO to assess vulnerability and exposure. Include relevant international data sharing protocols, data format standards.

Focus Area 3 Promote the use of EO to predict and analyse future risk trends and map hot spots.

Activity 3.1

Show how EO data can complement the data that governments already have to assess risk and risk trends over time, monitor implementation and progress towards achieving the global Sendai Framework targets and plan for implementation. Use the answers that are received from the survey undertaken by SG1's activity that will capture relevant DRR-related activities across the GWP.

Deliverable 3.1: Summary of examples on how EO data can complement the data that governments already have to assess risk and risk trends over time, monitor implementation and progress towards achieving the Sendai Framework global targets. Monitor the implementation of EO data in countries who have participated in the virtual workshop.

Activity 3.2

Promote the use of EO by government authorities in GEO to predict and analyse future risk trends and map the hot spots. Host a workshop that will bring together experts from the space and Earth science domain who have made use of EO in mapping disaster prediction and impact. Setup a virtual workshop where some of the Subgroup 2 members who are expert in GIS/remote sensing mapping can show case for country Sendai Framework focal points or institutions how EO can be used to manage future risk. Sendai Focal Points and other national authorities from GEO member countries are the target group for this event. Monitor the implementation of EO data in each of the countries that participated in the virtual workshop. Conduct an assessment on the country's current adoption of earth observation data to predict and analyse future risk trends and map hot spots.

Deliverable 3.2: Host a workshop that will bring together experts from the space and Earth science domain who have made use of EO in mapping disaster prediction and impact. During this virtual workshop, some of the subgroup 2 members who are experts in GIS/remote sensing mapping can demonstrate how EO can be used to predict and analyse future risk.

Resources

Subgroup 2 members donate in-kind their work hours for completing the activities they are engaged in. If there are other costs that the individual member organisations cannot finance, then the lead will specify the other funding sources.

Subgroup Governance

Co-chair and Deputies:

Janet Edwards, MSB, Sweden, DRR WG Co-Chair, SG2 Lead

John L. LaBrecque, chair of IUGG, USA, Deputy SG2

Aliyu Abdullahi, African Climate Change Research Centre (ACCRE), Nigeria, Deputy SG2

Supported by:

Relevant GEO WP Activity Leads

Steven Ramage, GEO Secretariat

Rui Kotani, GEO Secretariat

Subgroup Members

Allison B. Craddock, IAG, Jet Propulsion Lab, NASA, California, USA

Cheila Avalon Cullen, University of New York, USA

Rhea Katsanakis / Roshni DAVE / Adam FYSH, UNDRR, Geneva

Gissela Patricia Diaz, National Service for Disaster Risk Reduction and Emergencies, Ecuador

Luis Donas, National Emergency Office, Ministry of Interior and Public Security (ONEMI), Chile

Markus Enekel, Harvard University / World Bank, Massachusetts, USA

Nhilce N. Esquivel Stockholm Environment Institute (SEI)

Wim Hüge, Independent/ World Data System Director of Strategy

Susanne Ingvander, Swedish Civil Contingencies Agency, Sweden

Alik Ismail-Zadeh, Karlsruhe Institute of Technology, Germany

Markus Enekel, Harvard Humanitarian Initiative, World Bank

Farai Kuri, Scientific and Industrial Research and Development Centre, Zimbabwe

Sandra Novoa Luque, National Service for Disaster Risk Reduction and Emergency Management in Ecuador.

Pending: Fabian Löw, Federal Office of Civil Protection and Disaster Assistance, Germany

David Matamoros, Escuela Superior Politécnica del Litoral (ESPOL), Ecuador

Nathaniel Newlands, Science and Technology Branch, Agriculture and Agri-Food, Canada

Glenn Newnham, Landscapes and Ecology Group, CSIRO Land and Water, Canberra, Australia

Viet Ha Nhu, Hanoi University of Mining and Geology, Vietnam

Sandra Novoa Luque, National Service for Disaster Risk Reduction and Emergencies, Ecuador

Taiwo Seun Ogunwumi, Action Against Hunger, Nigeria

Luigi Piccardi, Italian CNR (National Research Council), Italy

Sitraka Raeliarivao, National Office of Disasters, Madagascar

Working Arrangements

SG₁ activities will primarily occur through conference calls and email communications. SG₂ will meet quarterly and preferably one week before the DRR WG meetings. However, the leads for each of the Roadmap activities will call a digital meeting in their activity group whenever needed. Additional SG₂ physical meetings can be planned during existing related conferences/workshops (Regional UNDRR meetings, EGU, AGU, Understanding Risk, etc.).

SUBGROUP 3: CLIMATE CHANGE AND SDG COORDINATION

Purpose

Subgroup 3 (SG3) provides an overview of the links between climate change and SDG activities in the GEO work programme. The group connects to the Climate Change Working Group (CC-WG), which is convened to develop and implement a comprehensive GEO climate change action strategy to advance the use of Earth observations in support of climate adaptation, mitigation, loss and damage and other areas. At the same time, there is an initiative in the GEO work programme called Earth Observations for the Sustainable Development Goals (EO4SDG), which has been working on SDG activities for the last three years. It is also important for the SG3 to work with the team involved in this initiative, as well as other SDG activities in the GEO work programme.

Key activities and deliverables

- Work with SG1 to understand the breadth of DRR activities across GEO.
- Work with SG2 to understand how the DRR-WG can and will respond to the Sendai Framework and associated activities.
- Develop links between DRR, Climate Change and SDGs, notably for adaptation, early warning, and resilience.
- Document an end-to-end approach of the impacts of climate change on DRR and the SDGs, for example wildfires. Global Wildfire Information Services is an existing activity in the GEO work programme, which could be a case study. Where possible connect different scales of activities – from local, national, and regional to global. Share outputs with GEO Capacity Development WG.
- Promote the sharing of DRR data from different platforms, technologies, themes and domains. Also work with the new GEO Data WG on this topic.

Activities with timelines

I. Activity 1- First Quarter 2021

- A. Identify and Discuss DRR Activities across GEO.
- B. Collate information on the different types of disasters associated with land, ocean and atmosphere in different countries and their social, economic, and ecological impacts, for example: Land – Earthquake, Volcano, Landslides, Drought, Desertification, Subsidence, Tornadoes, Rockslides, Forest fires; Ocean – Tsunami, coastal pollution, hurricanes/cyclone/typhoons; Atmosphere - Dust storms, lightning; Snow/Glaciers - Snow avalanches.
- C. Discuss/identify how DRR-WG will respond to associated SFAs at country and global scales
- D. Develop or agree on an existing global risk register of disasters and as much as possible or is available stipulate the social economic and ecological vulnerabilities
- E. Link these information (in 1.1.2 and 1.1.3) with CC impact, the challenges and how they impact attainment of the related SDG at country and global scales
- F. Collate information on evidence of climate change (changes in temperature, soil moisture, rainfall, and ground water); how and what kind of GEO data can be used in in the various CC contexts.

- G. Identify and promote information about how GEO would contribute towards enhancing climate change adaptation, and the attainment of SDG amidst the challenges identified in 1.1.2
 - H. Collect/compile information about country efforts related to early warning of disasters
 - I. Collate/collect information how EO data is being used in different countries for mapping monitoring, and early warning
 - J. Identify capacity building needs/requirements in the different countries
- II. Activity 2 Second Quarter 2021
- A. Country level capacity development plans in sync with overall GEO and WG purpose
 - B. Based on output 1.1.3, collate information on how DRR-WG will respond to associated SFAs at country and global scales
 - C. In collaboration with SG₂, identify how SG₃ can use its resources (in kind) to promote the dissemination and use of earth observation data to strengthen capabilities towards DRR at country and global scales based on UNDRR guidelines
 - D. Based on DRR-WG purpose, and in collaboration with SG₂, discuss how to combine different relevant data sources aimed at DRR.
 - E. Facilitate the production and promotion of SFA and SDG relevant information gathered in Activity 1.1 among researchers, policy makers and citizens while being mindful of the formats of data collation and dissemination at local and national levels
 - F. In collaboration with SG₂ and SG₁, propose a data sharing protocol.
- III. Activity 3 First, Second and Third Quarters
- A. Develop links between DRR, Climate Change and SDGs, notably for adaptation, early warning, and resilience (ongoing work within first - third quarters).
 - B. Associate the 17 SDGs to CC, SFA and DRR (first quarter)
 - C. Map priorities of the Paris Climate Agreement with those of SFA for DRR. Identify any overlaps (for example, climate hazards) (second quarter)
- IV. Activity 4 Second - Fourth Quarter
- A. Based on outputs 2.2 and 3.1, there would be a subgroup virtual meeting to discuss, identify and document an end-to-end approach of the impacts of climate change on DRR and the SDGs.
 - B. Facilitate specialized virtual meeting with relevant Work Group and professionals on different Hazard information services/ systems, for example, the Global Wildfire Information Services is an existing activity in the GEO work programme, which could be a case study.
- V. Activity 5 - First - Fourth Quarter
- A. SG₃ will promote the sharing of DRR data from different platforms, technologies, themes, and domains. Also work with the new GEO Data WG on this topic.

As much as possible, all activities listed will attempt connecting different scales of activities – from local, national, and regional to global. Outputs would be shared with the new GEO Capacity Development WG.

Resources

Subgroup 3 members donate in-kind their work hours for completing their activities.

In consultation with members of the subgroup, the SG₃ Lead and Deputy Chairs would discuss and identify sources of funding processes/activities that involve financial costs that the individual members or organisations cannot finance.

Governance Subgroup

Co-chair and Deputies

Kene Onukwube / DEAR Africa, DRR WG Co-Chair, SG₃ Lead

Cheila Cullen / City University of New York, Deputy Chair SG₃

Ramesh Singh / Chapman University, Deputy Chair SG₃

Rasul Gulam / ICIMOD Deputy Chair SG₃

Subgroup Members

Carolina Adler / MRI,

Maria Herminia Cornejo Rodriguez / Ecuadorian Climate Change Group, Red Ecuatoriana de Cambio Climatico, RECC

Ramesh Singh / Chapman University,

Markus Enenkel / Harvard University,

Ghulam Rasul / ICIMOD

Roger Pulwarty / NOAA,

Rosa Cuesta / Instituto Geográfico Militar del Ecuador

Omowumi Rabiú / ACCREC

European Commission

Kene Onukwube / Development Education and Advocacy Resources for Africa (DEAR Africa)

Cheila Cullen / City University of New York,

Fernando R. Echavarría / US Department of State,

Working Arrangements

SG₃ activities will primarily occur through conference calls and email communications. Members will meet quarterly and preferably one week before the DRR WG meetings.

As relevant, SG₃ Lead and Co-chairs will meet on monthly basis.

For ease of coordination, Activity 1-5 would be clustered and facilitated by smaller teams within SG₃ by facilitators based on area of interest, expertise or experience. These team facilitators will call a virtual team meeting whenever necessary and report to the broader SG₃. Progress of the team will be monitored by the Co-Chair and Deputy Chairs.

Additionally, based on need and availability of resources, a physical (or blended physical and virtual) meeting can be scheduled. One option would be to hold SG₃ meetings the week before DRR-WG meetings, quarterly. At least one physical meeting should be expected annually (perhaps during GEO Week).

Reporting

Periodic reporting schedule needs to be determined (to inform annual DRR WG Report to Programme Board).

Draft Output of Activities 1 - 5 linked to Timeline

Activity	Expected outputs	Timeline 2021 only				SG3 member(s) Responsible
		Q1	Q2	Q3	Q4	
Activity 1						
1.1	Documented list of DRR Activities across GEO					TBD
1.2	Information on the different types of disasters and their social, economic, and ecological impacts					TBD
1.3	Minutes of meeting + recommendations on how DRR-WG will respond to associated SFAs					TBD
1.4	Global Risk register and the social economic and socio-ecological vulnerabilities					TBD
1.5	Document on CC impact and their impact on attainment of the SDGs					TBD
1.6	Documented information on evidence of CC linked to kind of GEO data to be used per CC context					TBD
1.7	Promotional information (and channels) based of different formats (infographs, flyers, tweets, etc) about how GEO contributes to enhancing CC adaptation, SDG					TBD
1.8	Documentation/ narrative of Country level EW efforts/ status					TBD
1.9	Narrative of how GEO data is used per country					TBD
1.10	Documentation of capacity building needs					TBD
Activity 2						
2.1	Document and narrative on CD plans at country level					TBD
2.2	DRR-WG Response plan to the SFA based on 1.1.3					TBD
2.3	Minutes of SG2 & SG3 meetings. + Narrative on potential/ available dissemination or promotional channels of EO data.					TBD
2.4	Minutes of SG2 & SG3 meetings. + Narrative on different DRR data sources					TBD
2.5	Document on production format and promotion processes of SFA and SDG relevant information					TBD
2.6	Data sharing protocol SG1, SG2, and SG3					TBD
Activity 3						
3.1	(Document). Links between DRR, Climate Change and SDGs					TBD
3.2	17 SDGs to CC, SFA and DRR (Document)					TBD
3.3	Priorities of the Paris Climate Agreement with those of SFA for DRR. (Document)					TBD

Activity	Expected outputs	Timeline 2021 only				SG3 member(s) Responsible
		Q1	Q2	Q3	Q4	
Activity 4						
4.1	End-to-end approach of the impacts of climate change on DRR and the SDGs. (Minutes of meeting + document)					TBD
4.2	Different Hazard information services/ systems. (Minutes of meeting + document)					TBD
Activity 5						
5.1	DRR data collated for sharing. + new GEO data WG Work plan					TBD

Activity Facilitation Teams (FT)

The activities in 1.1 - 5.1 would be clustered and managed by FT based on areas of interest, experience, and expertise.

Activity Clusters	Facilitation Team	FT Leads
1.1 - 1.6	FT 1	TBD
1.7 - 2.2	FT 2	TBD
2.3 - 3.1	FT 3	TBD
3.2 - 5.1	FT 4	TBD