

---

# Economic and Social Council

28 July 2022

---

## Committee of Experts on Global Geospatial Information Management

### Twelfth session

New York, 3–5 August 2022

Item 12 of the provisional agenda\*

### Geospatial information and services for disasters

## Geospatial information and services for disasters

### Note by the Secretariat

#### Summary

The present paper contains the report of the Working Group on Geospatial Information and Services for Disasters for consideration by the Committee of Experts on Global Geospatial Information Management.

At its eleventh session, held virtually on 23, 24 and 27 August 2021, the Committee of Experts adopted decision 11/108, in which it noted the continued efforts of the Working Group to promote the importance of geospatial information and services in disaster risk reduction and management and, in particular, the relevance of the Strategic Framework on Geospatial Information and Services for Disasters during the ongoing coronavirus disease (COVID-19) pandemic. The Committee also endorsed the implementation of the Working Group's workplan for the period 2020–2023 and invited Member States and relevant experts to contribute as members of the Working Group to actively progress the activities as outlined in the workplan. Furthermore, the Committee congratulated the Working Group for successfully raising awareness of the Strategic Framework, including the enhanced engagement and collaboration with multiple key stakeholder groups and international organizations, thereby ensuring consistent communication and coherence and avoidance of duplication of effort. The Committee supported the development of a global disaster risk reduction inventory on organizations, services and platforms, and invited Member States, disaster risk reduction and management organizations and relevant academia, private sector and United Nations system organizations to participate in the global administration of inventory surveys.

The Committee of Experts acknowledged the importance of the results and recommendations included in the draft report entitled "Assessment 2020 results: Strategic Framework on Geospatial Information and Services for Disasters" and recommended that further capacity-building and outreach efforts be pursued to enhance the implementation of the Strategic Framework. In addition, the Committee recommended reopening the assessment survey to the Africa and Arab States regions with a view to providing those regions with another opportunity for completion, and the subsequent development of a second edition of the Assessment 2020 results document. Furthermore, the Committee welcomed the Working Group's support for the development of a statistical framework on disaster-related statistics and expressed its appreciation for the establishment by the Statistical Commission of the Inter Agency and Expert Group on Disaster-related Statistics.

---

\* E/C.20/2022/1

In this present report, the Working Group provides information on its progress and intersessional activities, including the implementation of its workplan and the advancements made by its four task teams, with the following particular responsibilities: (a) implementation of the Strategic Framework on Geospatial Information and Services for Disasters; (b) design and implementation of scenario-based exercises; (c) fostering communication and awareness-raising; and (d) alignment of the Strategic Framework on Geospatial Information and Services for Disasters with the Integrated Geospatial Information Framework.

The Working Group also reports on its implementation of the key activities outlined in decision 11/108 of the Committee of Experts, including the development of a global disaster risk reduction inventory of organizations undertaking activities with regard to disaster risk management, geospatial data and information, tools and platforms that could aid disaster risk management activities at the national, regional and global levels. This included preparing two online questionnaires – which were circulated to national mapping and geospatial agencies, disaster risk reduction and management organizations, academia, the private sector and United Nations system organizations – compiling the data submitted and designing a knowledge base and an action plan in order to develop, populate, test and roll out the proposed inventory hub.

This report serves to highlight the collaborative initiatives conducted by the Working Group in conjunction with other disaster risk reduction bodies such as the Group on Earth Observations Disaster Risk Reduction Working Group, the disasters programme of the National Aeronautics and Space Administration, the Regional Committee of United Nations Global Geospatial Information Management for the Americas and its Caribbean Geospatial Development Initiative. In addition, the report provides an overview of the efforts made by the Working Group to better understand the status of the national geospatial information and services landscape across all phases of disasters, including the challenges experienced and the work carried out with regard to reopening the assessment survey to the Caribbean region, supported by the Economic Commission for Latin America and the Caribbean office in Trinidad and Tobago. The work accomplished included the convening of a special consultative meeting with key stakeholders in the Caribbean so as to provide them with another opportunity to complete the assessment. This exercise facilitated the start of work on the development of a second edition of the Assessment 2020 results document. The information obtained will be used to inform the Committee of Experts about the implementation and monitoring of the Strategic Framework on Geospatial Information and Services for Disasters.

This report also contains an overview of the capacity development initiatives conducted by the Working Group, including the successful holding of a geospatial capacity development conference on global navigation satellite system applications and disaster risk reduction, which was jointly hosted by the Working Group, the Regional Committee of United Nations Global Geospatial Information Management for Asia and the Pacific and the Geospatial Information Authority of Japan.

The Working Group proposes that it will research, explore and document geospatial data collection and sharing challenges experienced by national disaster risk and response agencies and international organizations throughout all phases of the disaster risk management cycle, and define and develop global geospatial data preparedness, sharing and collection guidelines and protocols so as to support risk reduction and emergency management, particularly during crisis events. The Working Group proposes that its efforts be conducted in collaboration with the Working Group on policy and legal frameworks for geospatial information management, with a view to leveraging its expertise and relevant work on the legal aspects of the availability and licensing of geospatial information.

## **I. Introduction**

1. The growing number of disaster events and more so climate related disasters are increasing in comparison to previous decades. It is critical to pay keen attention to this emerging development and the cumulative systemic and interconnected nature of risk which impacts end to end systems and governance mechanisms.

2. The Working Group on Geospatial Information for Disasters (Working Group) aims at providing solutions through geospatial services in addressing cascading and systemic risk. There has been a call to action for Member States to implement the Strategic Framework on Geospatial Information and Services for Disasters 2016 - 2030 (Strategic Framework), which contributes to the implementation of the Sendai Framework on Disaster Risk Reduction 2015-2030. The Strategic Framework is also fundamental to the achievement of the 2030 Agenda for Sustainable Development.

3. At its eleventh session, held virtually on 23, 24 and 27 August 2021, the Committee of Experts adopted decision 11/108, in which it noted the continued efforts of the Working Group to promote the importance of geospatial information and services in disaster risk reduction and management and, in particular, the relevance of the Strategic Framework during the ongoing coronavirus disease (COVID-19) pandemic. The Committee also endorsed the implementation of the Working Group's workplan for the period 2020–2023 and invited members of the Working Group to actively progress the activities as outlined in the workplan. Furthermore, the Committee congratulated the Working Group for successfully raising awareness of the Strategic Framework, including the enhanced engagement and collaboration with multiple key stakeholder groups and international organizations, thereby ensuring consistent communication and coherence and avoidance of duplication of effort. The Committee supported the development of a global disaster risk reduction inventory on organizations, services and platforms, and invited Member States, disaster risk reduction and management organizations and relevant academia, private sector and United Nations system organizations to participate in the global administration of inventory surveys.

4. The Committee of Experts is invited to take note of the report, to express its views on the activities of the Working Group, including its continued efforts to implement the Strategic Framework and to use the resources available from the disaster risk reduction organizations, geospatial information and services inventory hub and support its maintenance. Points for discussion and decision are provided in paragraph 55.

## **II. Activities of the Working Group**

5. The Working Group's objectives are accomplished through the work undertaken by its Bureau and four task groups. During the intersessional period, the Working Group convened two virtual meetings, on 1 December 2021 and 23 March 2022. These meetings were led by the Jamaica and Japan as co-chairs and the task group leads. The task groups are: A) Implementation and monitoring of the Strategic Framework; B) Design and implementation of scenario-based exercises on different hazards, including predictive modelling to test and improve the Strategic Framework per country and/or region; C) Foster Communication and Awareness Raising; and D) Support the use of the Integrated Geospatial Information Framework (IGIF). The following paragraphs provide a brief highlight of Working Group meetings and the activities performed by the task groups during the intersessional period.

## **Working Group meetings**

6. The first Working Group meeting held on 1 December 2021, was attended by 34 participants<sup>1</sup> from 11 Member States and eight UN system organizations, international organizations and private sector. The Working Group reviewed the decisions from the eleventh session and discussed the related work items. Updates were provided from each task group, including Working Group presentations delivered at related events, disaster risk reduction inventory administration, and strategic direction of scenario-based exercise. Task groups were encouraged to convene regular meetings to support the execution of the workplan. Collaboration with other bodies, such as the Regional Committee of United Nations Global Geospatial Information Management for the Americas (UN-GGIM: Americas) and GEO Disaster Risk Reduction Working Group were also reported.

7. The second Working Group meeting was held on the 23 March 2022 and was attended by 49 participants<sup>2</sup> from 12 Member States and 12 UN system organizations, international organizations, private sector and academia. Two members from MapAction presented on their response to the crisis and humanitarian efforts in Eastern Europe. A presentation on Volunteered Rapid Disaster Monitoring and Mapping was delivered by two representatives of MapAction's collaborating organizations. This was followed by reports from the four task groups on their activities. The reports covered work being done on implementing and monitoring the Strategic Framework, re-administering the Strategic Framework Disaster Assessment Tool within the Caribbean, and collaboration among the Working Group, GEO Disaster Risk Reduction Working Group and Jamaica.

8. In addition, the Geospatial Capacity Development Conference on GNSS Applications and Disaster Risk Reduction, held by the Geospatial Information Authority of Japan, UN-GGIM-AP and the Working Group was reported. The Working Group also discussed enhancement of communication with other bodies and acknowledged the Working Group's infographics prepared by UN Graphics Unit with input from Task Group C. The Working Group also discussed the Disaster Risk Reduction Inventories, to provide a platform for organizations to access data on the many existing organizations undertaking disaster risk management activities and existing geospatial information and services platforms that can provide invaluable resources to aid planning and response efforts.

9. Additionally, under the leadership of Task Group C, representatives from the Working Group held a small informal in-person meeting on 11 May 2022, during the Geospatial World Forum in Amsterdam, the Netherlands. Representatives from Jamaica, Mozambique, GEO Disaster Risk Reduction Working Group, United Kingdom and United States of America attended. This was the first in-person meeting of Working Group members since 2019. During this meeting, there were social exchanges, and brief discussions on the status of some workplan items.

## **Implementation of the work plan 2020-2023– Task Groups**

10. The Working Group's 2020-2023 workplan was endorsed at the eleventh session of the Committee of Experts. The task groups and the Working Group members have strategized to implement the work plans under the following four goals: 1) Foster communication and awareness raising, 2) Implement the Strategic Framework, 3) Design and prepare scenario-

---

<sup>1</sup> The participants were from: China, Jamaica, Japan, Mozambique, New Zealand, the Philippines, Poland, Sweden, Thailand, the United Kingdom, Uzbekistan, UNESCAP, UNFPA, UN-GGIM Academic Network, CEOS, GEO Secretariat, MapAction, GeoThings, and UN-GGIM Secretariat

<sup>2</sup> The participants were: China, Jamaica, Japan, Indonesia, Mozambique, New Zealand, the Philippines, Poland, Sweden, Thailand, the United Kingdom, Uzbekistan, UN-GGIM Academic Network, CEOS, GEO Secretariat, IHO, MapAction, Esri, Gates Foundation, GeoThings, UNECA, UNESCAP, UNFPA, UN-GGIM Secretariat.

based exercises on different hazards, and 4) Provide a forum for dialogue, coordination and capacity building.

*Activities: Task Group A - Implementation and monitoring of the Strategic Framework*

11. Task Group A under the leadership of Jamaica, continued to seek and maximize on opportunities to create greater awareness on the importance, implementation of the Strategic Framework, and its monitoring using the Assessment Survey tool. The Strategic Framework Assessment Survey was conducted in 2020 and a background paper on its results presented at the eleventh session in 2021. Given insufficient responses from some regions to the Assessment Survey, and in fulfilment of Decision 11/108, Task Group A delivered a sensitization presentation to the Regional Committee of United Nations Global Geospatial Information for Africa (UN-GGIM: Africa) and UN-GGIM: Americas meetings. In addition, collaborations were forged to re-administer the Assessment Survey to support increased submissions. These activities will be expanded in section III.

*Activities: Task Group B - Design and implementation of scenario-based exercises*

12. Task Group B, under the leadership of Japan, continued with its efforts to design and prepare disaster scenarios. It was found that no single scenario or model would be adopted for all hazards. Task Group B is seeking wider participation to build a community of practice, and to learn of many applicable scenarios from the participants.

*Activities: Task Group C - Foster communication and awareness raising*

13. The Task Group C, under the leadership of Jamaica, continued to facilitate various initiatives that promoted increased communication and awareness raising on the visibility and work of the Working Group and the importance and the implementation of the Strategic Framework. These initiatives were facilitated through partnerships and collaborations with disaster risk reduction and management bodies, functional and thematic groups of the Committee of Experts and Member States. These activities will be elaborated in sections III and IV of the report.

*Activities: Task Group D - Support the use of the Integrated Geospatial Information Framework (IGIF).*

14. Task Group D, under the leadership of New Zealand, continued to focus on the Strategic Framework and its alignment with the IGIF. The Working Group applauds the achievements of the High-Level Group on the Integrated Geospatial Information Framework (HLG-IGIF) and the advancements made in IGIF implementation. Given previous work pursued by the Working Group in preparing a background paper on the alignment of the Strategic Framework with the IGIF, the Working Group remains committed to supporting the implementation of the IGIF, whilst implementing the Strategic Framework.

### **III. Increasing awareness of disaster risk management and geospatial information**

#### **Conferences and webinars**

*7<sup>th</sup> Plenary Meeting of UN-GGIM: Africa*

15. To increase awareness of the Assessment Survey and its results presented in the background paper, [“Assessment 2020 Results- Strategic Framework on Geospatial Information and Services for Disasters”](#), Task Group A delivered a presentation on “Geospatial Information and Services for Disasters – the Strategic Framework” on 25 November 2021 at the 7<sup>th</sup> Plenary

Meeting of UN-GGIM: Africa. During the presentation, an overview was provided on the Working Group, the Assessment Survey and its results presented in the background paper acknowledged by the Committee of Experts at its eleventh session. Special focus was placed on Decision 11/108, and African Member States were encouraged to complete the re-administered Assessment Survey and the planned Disaster Risk Reduction inventory surveys.

*8<sup>th</sup> Plenary Meeting of UN-GGIM: Europe*

16. Towards encouraging further engagement with regional committees, Task Group A delivered a presentation entitled “Geospatial Data Driving Disaster Risk Management during the Decade of Action” during the 8th Plenary Meeting of UN-GGIM: Europe on 13 October 2021. The presentation highlighted outcomes of the eleventh session, findings of the Strategic Framework Background Paper, with special focus on Europe’s regional perspective. The Working Group recognized the progress made by European Member States, given their achievements of categories 3-5 of the priorities for action in the Strategic Framework, and encouraged the support of European Member States in facilitating knowledge sharing.

*Group on Earth Observations - GEO Virtual Symposium 2022*

17. The Working Group delivered two presentations entitled “Jamaica’s Disaster Needs: Disaster Portfolio and Vulnerability” and “Jamaica’s Disaster Needs: Opportunities and Challenges for Earth Observations uptake in disaster risk reduction”. Both presentations were delivered during the “Assessing Systemic Risk in Jamaica” session of the GEO Virtual Symposium on 4 May 2022. The first presentation examined Jamaica’s National Disaster/Emergency Response Framework, history of past disasters and looked at disasters through the lenses of technology. The second presentation examined the use of geospatial information and technologies supporting disaster response in Jamaica, opportunities and challenges for increased uptake of geospatial, statistical and Earth observations for disaster risk reduction, the use of existing Earth observation data in Jamaica and Jamaica’s newly launched Systemic Risk Assessment Tool (J-SRAT).

**Strengthening Communication**

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

18. To provide more effective communication of the Strategic Framework through presentations and document preparations, the UN-GGIM Secretariat and Task Group C with technical support from the UN Graphics Unit prepared infographics showing an overview of the Strategic Framework, a summary of associated priorities and displayed the Strategic Framework within the overall global and UN-GGIM frameworks. Members of the Working Group, disaster risk reduction organizations and other UN system organizations are invited to utilize the infographics in promoting the Strategic Framework. The infographics are accessible on the Working Group’s webpage via: [https://ggim.un.org/documents/GGIM-Framework-Disasters\\_Annex1%20.pdf](https://ggim.un.org/documents/GGIM-Framework-Disasters_Annex1%20.pdf)

**IV. The Development of a Global Disaster Risk Reduction Inventory**

19. At the eleventh session, the Committee of Experts adopted decision 11/108, which supported the development of a global disaster risk reduction inventory on organizations, services and platforms, and invited Member States, disaster risk reduction and management organizations and relevant academia, private sector and United Nations system organizations to participate in the global administration of the inventory surveys. Task Group C developed two inventory surveys, an organizations inventory and the other a geospatial information and services platform inventory. The surveys were disseminated to Member States and disaster risk reduction organizations to be

completed. Existing partnerships and collaborations with CEOS Working Group Disasters, GEO Disaster Risk Reduction Working Group, National Aeronautics and Space Administration (NASA) and The World Geospatial Industry Council (WGIC) Disaster Resilience Working Group were asked to promote the completion of both disaster risk reduction surveys among their membership and their mailing lists.

20. As of mid-July 2022, 61 responses were received from Member States, disaster risk reduction and other related organizations worldwide. Additionally, 52 responses were received on existing global disaster risk reduction geospatial information services and platforms. To promote greater awareness and provide a platform for disaster risk reduction and management organizations, academia and other users to access data on the many existing organizations undertaking disaster risk reduction and management activities, Task Group B has developed an inventory hub to house and manage the data collected from the survey. The Working Group extends gratitude to all organizations that contributed time and effort to complete the surveys and encourages the active utilization of the wealth of information available on the disaster risk reduction inventory hub in pre, during and post disaster activities. The Working Group plans to officially launch the hub during one of its side events at the Twelfth Session.

21. The Working Group extends an open invitation to Member States, disaster risk reduction and management organizations and relevant academia, private sector and United Nations system organizations to continue collaborating by contributing to the maintenance of the global disaster risk reduction inventory hub via the following active surveys, whenever new information becomes available: [UN-GGIM WG Disasters - DRR Organizations Inventory Survey](#) and [UN-GGIM WG Disasters - DRR Geospatial Info & Services Platforms Inventory Survey](#).

## V. Collaboration with other bodies

### **The Committee on Earth Observation Satellites (CEOS) Working Group on Disasters and Group on Earth Observations (GEO) Disaster Risk Reduction Working Group**

22. The Working Group also collaborated with Earth observation communities. The Working Group was invited to deliver a presentation at CEOS Working Group Disasters meeting on 23 September 2021. The Working Group was also represented at the GEO Disaster Risk Reduction Working Group's 4<sup>th</sup> quarter meeting on 18 September 2021, their 1<sup>st</sup> quarter meeting on 16 February 2022 and their 2<sup>nd</sup> quarter meeting on 27 June 2022. During these meetings, progress on joint initiatives were presented. The Working Group had a series of follow up meetings with GEO Disaster Risk Reduction Working Group and examined the workplans of both Working Groups to explore the possible areas for collaboration including executing the Aguascalientes Declaration Joint Action Plan 2021 – 2024. Discussion included increasing the use of Earth observation data for achieving the Sendai Framework's Global Target E, that is to substantially increase the number of countries with national and local disaster risk reduction strategies, the potential development of scenario-based exercises on different hazards developed and to share existing thematically focused Working Group activities where Earth observations are being integrated.

### **UN Global Assessment Report 2022, Earth Observations into Action**

23. The Working Group was pleased to accept an invitation extended by the CEOS Working Group on Disasters to collaborate in producing a chapter in the "UNDRR Global Assessment Report 2022 Earth Observations into Action" contributing a paper entitled "Earth observations into action: Systemic integration of Earth observation applications into national risk reduction decision structures leveraging geospatial data infrastructures". The five-page contribution on "Earth Observations in the Context of National Risk Reduction Decision Structures Leveraging Geospatial Solutions" developed by Task Groups A and C was accepted and published on pages

20-24 of the paper<sup>3</sup>. The full document was published this year when the United Nations Office for Disaster Risk Reduction (UNDRR) released the Global Assessment Report on Disaster Risk Reduction (GAR) 2022.

24. The paper highlighted the efforts of the CEOS Working Group on Disasters and GEO Disaster Risk Reduction Working Group in promoting existing and relevant policy frameworks that increases the utilization of Earth observation data, including the Strategic Framework. It provided an overview of the Working Group and the Strategic Framework, the results of the Assessment Survey within the Americas as the first region that was analyzed, in addition to gaps and challenges in integrating Earth observation applications into national disaster risk reduction decision structures. It highlighted the efforts of the Working Group in forging partnerships since regional and global cooperation are critical in managing geospatial information and services during disasters.

25. The Working Group congratulates all members of the CEOS and GEO working groups who contributed their time and effort in producing the paper and looks forward to continued and future partnerships with both groups towards increasing the utilization of Earth observation in disaster risk reduction initiatives reflected in relevant workplans.

#### **Aguascalientes Declaration Joint Action Plan 2021 - 2024**

26. [“The Aguascalientes Declaration, Better Together: Geospatial Information for Decision Making in the Americas”](#) was approved at the virtual joint session of UN-GGIM: Americas and AmeriGEO in September 2020. The declaration called for better coordination and collaboration among regional bodies in the Americas in the use of geospatial information, Earth observation, statistical and other information to support national priority objectives.

27. In an effort to commence collaborations at the regional and international levels towards the implementation of the Aguascalientes Declaration, the first coordination meeting was held on 4 October 2021 with representatives from the Working Group, the UN-GGIM: Americas Disasters Working Group, the GEO Disaster Risk Reduction Working Group and AmeriGEO Disasters Working Group. Thereafter discussions were held to implement the Aguascalientes Declaration through a joint workplan.

28. A joint statement and strategic objective were developed by the Working Group, the UN-GGIM: Americas Disasters Working Group, the GEO Disaster Risk Reduction Working Group and AmeriGEO Disasters Working Group for inclusion under the “Communication, Cooperation, and Coordination” section of the Aguascalientes Declaration draft Joint Action Plan. The statement in the following paragraph was accepted at the 8th Plenary Meeting of UN-GGIM: Americas in November 2022.

29. *“Brought together by the Aguascalientes Declaration’s call upon stakeholders to work together to further define joint work strategies and programs, the UN-GGIM WG-Disasters, UN-GGIM: Americas Disasters WG, GEO Disaster Risk Reduction WG and AmeriGEO Disasters WG convened with the objective of mutually advancing regional integration of geospatial data and Earth observations for Disasters Risk Reduction (DRR) in the Americas. These global and regionally oriented Working Groups are committed to continued integration of work plan activities through quarterly coordination meetings. Shared priorities will include the improved uptake and use of geospatial, statistical and Earth observation insights by national DRR stakeholder and in particular capacity building, standards setting, awareness raising and making relevant data discoverable.”*

---

<sup>3</sup> The publication is available at: <https://reliefweb.int/report/world/earth-observations-action-systemic-integration-earth-observation-applications-national-risk-reduction-decision-structures-leveraging-geospatial-data-infrastructures>



### **Group on Earth Observation (GEO) Disaster Risk Reduction Working Group**

30. The Group on Earth Observations Disaster Risk Reduction Working Group and the Working Group have been working together to further define joint work strategies and programs with the mutual objective of advancing regional integration of geospatial data and Earth observations for disasters risk reduction in the Americas.

31. Reference is made to the text “*shared priority of improved uptake and use of geospatial, statistical and Earth observation insights by national DRR stakeholder*”, from the joint statement submitted by the four working groups included in the Aguascalientes Declaration Joint Action Plan, and the workplans of both GEO Disaster Risk Reduction Working Group and the Working Group. Further, Goal 3 (g) of the Working Group’s workplan, calls for collaboration with GEO Disaster Risk Reduction Working Group to increase the use of Earth observation data in countries with national and local disaster risk reduction strategies. Given the Aguascalientes Declaration Joint Action Plan, the GEO Disaster Risk Reduction Working Group and Working Group’s workplans, Jamaica was identified by the GEO Disaster Risk Reduction Working Group as one of the initial countries to pursue the development of an Earth Observation Risk Toolkit and examine integration of Earth observation in disaster risk reduction policy and legislation.

32. Jamaica is the first case study for the Earth Observation Risk Toolkit in the Caribbean sub-region of the Americas. The collaboration includes the following:

- (a) Jamaica’s membership of the Earth Observation Risk Toolkit user co-design group to provide user perspectives to ensure user friendly design and contents of the Toolkit;
- (b) Undertaking a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis of national disaster risk reduction strategy/legislation of Jamaica, with possible support for the inclusion of geospatial information and Earth observation data in new policy documents, in addition to identifying disaster risk reduction stakeholders in Jamaica that could benefit from Earth observation data, and
- (c) Implementation of Earth observation tools and/or services for disaster risk reduction in Jamaica.

33. The Working Group’s Co-chair and Task Groups A and C, both led by Jamaica, are members of the User Co-design Team of the Earth Observation Risk Toolkit for Jamaica. The Team is exploring the possibility of generating improved uptake and use of Earth observation tools and services for disaster risk reduction in Jamaica. A series of quarterly and monthly meetings and surveys were conducted with relevant national agencies, including the Office of Disaster Preparedness and Emergency Management, the National Spatial Data Management Branch, the National Land Agency and the Meteorological Services of Jamaica. These interactions aided the GEO Disaster Risk Reduction Working Group to understand the main risks/hazards based on frequency and severity, current Earth observation data workflows, for co-design procedures and strategies that build on existing capacities. Further research will be conducted with focus groups, towards determining greater potential for expanded Earth observation linkages, interactions and capacities and to identify multi-variate humanitarian risks. It is envisioned that products such as legislation including earth observation, and policy briefs will support and strengthen the use of Earth observation data in Jamaica’s disaster risk reduction program. Upon conclusion of the Jamaica case study project, other countries will be engaged. Given the magnitude of work, this project is pursued on a country-by-country basis.

34. The Jamaica Co-chair and Task Group A and C lead participated in the virtual GEO Symposium 2022, which was held under the topic “Assessing Systemic Risk in Jamaica”. Two

presentations were delivered by the representatives for this joint project. Details on the presentations are provided in Section III, of this report.

#### **The World Geospatial Industry Council (WGIC) Disaster Resilience Working Group**

35. The World Geospatial Industry Council (WGIC) through its Partnership and Industry Engagement Committee is focused on three strategic areas under the overarching theme of Climate Change. These include sustainable infrastructure, energy transition and disaster resilience. Three Working Groups were developed to help further these strategic areas.

36. The new established WGIC Disaster Resilience Working Group invited the Working Group to become a member, given the regional and international scope of its work and the combined expertise of its members in advancing the use of geospatial information and services in disaster risk management.

37. Task Group C has been representing the Working Group at WGIC Disaster Resilience Working Group monthly meetings from November 2021 to the present. The Working Group has contributed to the drafting of the WGIC Disaster Resilience Working Group terms of reference and workplan. and looks forward to further partnering with this body and contributing to mutual disaster resilience interests.

#### **OGC Disaster Pilot Project and Stakeholder Community Coordination Group (SCCG):**

38. The Working Group via Task Group C, continued to represent and contribute as an observer during monthly meetings of the Disaster Pilot Stakeholder Community Coordination Group (DP-SCCG) of the Open Geospatial Consortium (OGC) Disaster Pilot Project 2021. The Working Group commends the pilot project members on the substantial work executed in coordination of demonstrations and evaluations of resulting capabilities. The pilot integrated OGC standards, data, and services to support response of decision makers and responders to various hazards. The DP-SCCG fostered innovative collaboration among 30 organizations to envision and develop an interoperable standards-based ecosystem for fostering improved awareness and decisions in complex disaster management.

#### **UN-GGIM: Americas and CARIGEO**

39. Due to the lack of sufficient responses from some regions, including the Caribbean sub-region of the Americas, Task Group A with assistance from UN-GGIM: America's CARIGEO Steering Committee and UNECLAC re-administered the Assessment Survey for this sub-region. Official letters were sent to heads of Caribbean disaster response and/or geospatial agencies to support the Assessment Survey. Originally three Member States responded to the 2020 Assessment Survey. Through the 2021-2022 period of the survey, an additional three Member States responded.

40. A "UN-GGIM Strategic Framework on Geospatial Information and Services for Disasters Assessment Survey in the Caribbean" webinar was jointly planned for June 2022, to increase awareness of the Strategic Framework, its Assessment Survey and importantly how to properly complete the survey. Given low responses to the webinar invitation, the event was postponed. Additional efforts will be made to collaborate with the Caribbean Disaster Emergency Management Agency to engage the remaining eight Member States to complete the survey.

#### **Caribbean Disaster Risk Management Workshops**

41. The Working Group was invited to collaborate with UNECLAC in planning and executing two Caribbean Disaster Risk Management Workshops on 30 August 2021 and 6 September 2021. The first workshop was entitled "Policy issues towards effective application

of geospatial technologies and data in DRM”, and the second was entitled “Technical issues towards effective application of geospatial technologies and data in DRM”.

42. During the first workshop, the Working Group’s Task Group A delivered a presentation entitled “Supporting Geo-enabled DRM in the Caribbean”. This presentation provided an overview of the genesis, mandate and purpose of the Working Group, in addition to the purpose of the Strategic Framework. An overview of the CARIGEO and the collaboration with the Working Group towards promoting geospatially enabled disaster response in the region was also highlighted. In addition, Jamaica’s National Emergency Response GIS Team’s efforts in providing geospatial support in Jamaica and neighbouring Caribbean countries was also shared. Given the low responses in the Assessment Survey received from this sub-region, disaster and geospatial representatives from the sub-region were guided in how to interpret the questions and complete the Assessment Survey.

43. During the second workshop, the Working Group delivered a presentation entitled “UN-GGIM Working Group on Geospatial Information and Services on Disasters”. This presentation provided an overview of the genesis, mandate and purpose of the Working Group, in addition to the globally administered Assessment Survey. Further, the presentation focused on the results of the Assessment Survey within the Americas with emphasis on the Caribbean. It highlighted the importance of national disaster risk management agencies completing the Assessment Survey, understanding their current status and monitoring and tracking their progress in implementing the Disaster Framework. Given the low responses received from this sub-region, the attending disaster and geospatial representatives from the region were encouraged to take the time to complete the survey.

#### **MapAction**

44. Collaboration meetings were held with MapAction to discuss potential funding and greater contribution to the Working Group. Detailed examination of the Working Groups Workplan 2020-2023 and identification of potential areas for collaboration and support were conducted. Funding and strategies to support disaster-based scenario-based modelling exercises under Task Group B were discussed. Additionally, Task Group C facilitated an interview with MapAction towards producing a publication highlighting the contributions and impact made by MapAction to the Working Group.

## **VI. Re-administration of the Assessment Survey**

45. Given decision 11/108, the Committee of Experts recommended reopening the Assessment Survey to the Africa and Arab States regions with a view to providing those regions with another opportunity to participate, and the subsequent development of a second edition of the Assessment Survey 2020 results document. Although the survey was reopened to facilitate its completion by these regions during the intercessional period, no additional responses were received from Africa and the Arab States.

46. A similar opportunity was provided to the Caribbean to facilitate completion of the Assessment Survey. An additional three responses from Caribbean Member States were received, as presented in paragraph 42.

47. Given the no responses from Africa and Arab States and few additional responses from the Caribbean, the Working Group was not able to prepare a second edition of the Assessment Survey 2020 results document. An understanding of the status of implementation and monitoring of the Strategic Framework in these regions were therefore not achieved.

## **VII. Geospatial Capacity Development Conference on GNSS Applications and Disaster Risk Reduction**

48. The Working Group, UN-GGIM-AP and the Geospatial Information Authority of Japan (GSI) hosted the “Geospatial Capacity Development Conference on GNSS Applications and Disaster Risk Reduction (GCDC)” virtually from 17 to 20 January 2022. This conference was organized for the purpose of contributing to the SDGs through capacity development in the fields of Global Navigation Satellite Systems (GNSS) applications and disaster risk reduction. This conference also contributed to the realization of Objective I described in the Working Group’s workplan. There were 410 participants from national geospatial information agencies, UN system organizations, private sector, and academia.

49. Mr. Shoichi Oki, the Co-Chair of Working Group from Japan, chaired the Conference, and Mr. Simon Costello, President of UN-GGIM-AP, gave the welcome speech in the opening session. In keynote speeches, the understanding of disaster using real-time data from Continuously Operating Reference Station (CORS) such as GNSS tsunami early warning, the monitoring of crustal movement by volcanic activity, and the monitoring of land subsidence and landslide were showcased.

50. In addition, in the Workshop on Geospatial Disaster Risk Reduction for Decade of Action, efforts for disaster risk reduction utilizing geodetic technology and geospatial information, and case-based information sharing to support emergency response and disaster risk reduction efforts were shared. The Workshop on Operation, Maintenance and Applications of CORS, situations, challenges and operations and maintenance expertise and on-going and future projects of CORS were shared among countries. CORS utilization for disaster risk reduction and other emerging fields by the private sector were also presented.

## **VIII. Considerations going forward**

51. During the intersessional period, the Working Group steadily promoted activities as detailed in its Workplan 2020-2023. In particular, for Geospatial Capacity Development Conference on GNSS Applications and Disaster Risk Reduction, it was able to contribute to the Decade of Action by case-based information sharing to support emergency response and disaster risk reduction efforts as well as providing a forum for dialogue, coordination and capacity building, which is included in the goals of the work plan.

52. Disaster situations and their response efforts vary from country to country. Therefore, the Working Group will continue to promote its Workplan 2020-2023 based on the belief that it is important to improve respective responses by combining efforts through the sharing of knowledge and ideas.

53. Core to the Working Group's achievement of its goals, is the active contribution and support of its members. Considering the scope of disaster risk reduction work, the Working Group comprises a wide range of experts from national geospatial, risk reduction and statistical communities, international organizations, non-governmental organisations, academia and the private sector. The Working Group encourages and welcomes the participation of more experts.

54. The Working Group encourages Member States, disaster risk reduction and management organizations and relevant academia, private sector and United Nations system organizations to continue collaborating by contributing to the maintenance of the global disaster risk reduction inventory hub, whenever new information becomes available.

## **IX. Points for discussion**

55. The Committee of Experts is invited to:

- (a) Take note of the present report and work undertaken by the Working Group during the intersessional period and express its views and provide guidance on the continued efforts to implement the Strategic Framework on Geospatial Information and Services for Disasters;
- (b) Encourage Member States to become members of the Working Group and its task groups, actively contribute to expanding the use of geospatial information and services for disaster response initiatives and utilize the newly created infographics in promoting the Strategic Framework and its implementation;
- (c) Actively utilize the resources available on existing disaster risk reduction organizations, geospatial information and services platforms towards supporting national, regional and international disaster initiatives;
- (d) Provide continuous updates by contributing to the disaster risk reduction inventory surveys whenever new information becomes available, actively supporting the maintenance of the disaster risk reduction inventory hub, and raising awareness on existing resources for disaster risk reduction organizations, member states, UN System organizations and stakeholders.