



**Report**  
**Ninth Session of the United Nations Regional Committee for**  
**Global Geospatial Information Management for the**  
**Americas**  
**(UN-GGIM: Americas)**

**November 28, 29 and 30, 2022**  
**Santiago de Chile**

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## **CHAPTER I: ASSISTANCE AND ORGANIZATION OF THE SESSION**

### **Place and date of the meeting**

1. The Ninth Session of the United Nations Regional Committee for Global Geospatial Information Management for the Americas (UN-GGIM: Americas) was held at the offices of the Economic Commission for Latin America and the Caribbean (ECLAC), Santiago de Chile, on November 28, 29 and 30, 2022.

### **Attendance**

2. The Ninth Session was attended by 22 Member State representatives of the Regional Committee: Antigua and Barbuda, Argentina, Bahamas, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, Guatemala, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, United States, Uruguay, and Venezuela.
3. In addition, representatives of the following organizations attended: Pan American Institute of Geography and History (PAIGH), Academic Network of the Americas (AN-Americas), Private Sector Network of the Americas (PSN-Americas), PVBLIC Foundation, and SDG Data Alliance.
4. The United Nations Statistics Division as the secretariat for the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) also attended.

### **Presidency**

5. The Session was chaired by Sofía Nilo Crisóstomo, in her capacity as President of UN-GGIM: Americas.

## **CHAPTER II: AGENDA**

1. On the 28th November 2022, the Ninth Session of UN-GGIM: Americas approved the following provisional agenda:

Session 1:	Presentation of Regional Reports
Session 2:	Presentation of new tools for the dissemination of information geospatial
Session 3:	Situation, needs and challenges of the Member States of the Regional Committee
Session 4:	Thematic Session "Integrated Framework of Geospatial Information"
Session 5:	Regional Collaboration Thematic Session
Session 6:	Thematic Session "Looking to the Future"
Session 7:	Thematic Session "Global Statistical and Geospatial Framework"
Session 8:	Thematic Session "Strategic Framework for Geospatial Information and Services for Disasters"

Session 9: Thematic Session "Geodetic Reference Frame for the Americas"  
Session 10: Closing session of the meeting

2. Additionally, the following Parallel Events were held:

- The CARIGEO Initiative meeting on Wednesday, 30 November 2022.
- The SDG Data Alliance project meeting on Wednesday, 30 November 2022

## **CHAPTER III: DECISIONS**

The United Nations Regional Committee on Global Geospatial Information Management for the Americas (UN-GGIM: Americas), at its Ninth Session, held on November 28, 29 and 30, 2022 in person, made the following decisions:

### **I New tools for the dissemination of Regional Geospatial Information**

1. *Welcomed* the presentation of the new UN-GGIM: Americas website, implemented by the technical teams of the Economic Commission for Latin America (ECLAC) and the presentation of the Spatial Data Infrastructure for the Americas (SDI-Americas) website, as tools for the dissemination of existing and varying geospatial information resources in the region.
2. *Urged* the Board of Directors of UN-GGIM: Americas to establish a collaborative governance mechanism for these tools and to formulate projects for updating geospatial information that is generated within the operational framework of national geospatial data infrastructures, so that projects are documented and accessible from the SDI-Americas website.

### **II Integrated Framework of Geospatial Information**

3. *Encouraged* Member States to adopt the United Nations Integrated Geospatial Information Framework (UN-IGIF) for strategic decision-making related to national priorities and to actively collaborate with the IGIF-Americas Working Group, in order to share progress and experiences on the implementation of the UN-IGIF in the region.
4. *Encouraged* the IGIF-Americas Working Group to promote capacity development, open dialogue, and tools to support the Member States in building knowledge and implementing the UN-IGIF.

### **III Regional Collaboration**

5. *Encouraged* Member States and Territories in the Caribbean to fully participate in the Caribbean Geospatial Development Initiative (CARIGEO) to enhance geospatial

information management in the Caribbean sub-region, as well as to use effective methods and means to strengthen communication and raise awareness of this important initiative.

6. *Welcomed* the offer of ANA-Americas and PSN- Americas to design and implement at least one training course on a subject agreed by all the working groups of UN-GGIM: Americas. *Likewise*, welcomed the offer of ANA-Americas and its associated organizations to deliver certificates of attendance for courses carried out within the framework of the programmatic activities of UN-GGIM: Americas.
7. *Welcomed* the initiative to create a steering committee as a governance mechanism to lead the execution of the Joint Action Plan, prepared based on the Aguascalientes Declaration made up of the representatives/delegates of each signatory to the Aguascalientes Declaration and by the coordinators of each of its three working groups (Capacity Development, Communication, Cooperation/Coordination and Data/Information/Knowledge) resulting from the Joint Action Plan.
8. *Welcomed* the initiative for PSN-Americas to become a strategic member of the IGIF-Americas Working Group and also of the Working Group on the Strategic Framework for Geospatial Information and Services for Disasters (GISD) of the Americas. *Likewise*, welcomed the offer of PSN-Americas to design and develop a regional podcast with a geographic focus that will highlight the work and priorities of the region.
9. *Welcomed* the proposal to strengthen the joint work between the PSN-Americas and the ANA-Americas aimed at promoting the interaction between academia and industry in the field of geospatial information management, beginning with the preparation and execution of a training course to address a priority issue in the region.

#### **IV Looking to the future**

10. *Welcomed* the innovative research and progress of the Regional Hub for Big Data in Brazil (<https://unstats.un.org/bigdata/regional-hubs.cshhtml#brazil>) and encouraged Member States to contribute ideas related to the use of Big Data, satellite imagery and other sources, to inform the Sustainable Development Goals.
11. In this regard, *urged* Member States to respect national laws and regulations on geospatial information management and promote the ethical use of data. *Likewise*, welcomed opportunities for exchanges between AN-Americas and PSN-Americas and relevant stakeholders; and to promote the use of effective and efficient technologies for the management of geospatial information, including to explore the use of open source tools.

#### **V Global Statistical and Geospatial Framework**

12. *Encouraged* Member States to actively participate in capacity-building workshops on the principles of the Global Statistical and Geospatial Framework (GSGF), to be organized by the Working Group on the Integration of Statistical and Geospatial Information in the Americas during the period 2023-2025.

13. *Requested* Member States respond to a survey that will be initiated in the first quarter of 2023 to assess levels of disaggregated geographic information at the country level. The results of this survey will be used to formulate and implement a proposal for the incorporation of additional geostatistical information to the Statistical and Geospatial Framework of the Americas (MEGA).
14. *Welcomed* the proposal to adopt the MEGA as the only geostatistical framework for the Americas which provides support for compliance with the principles of the GSGF for the integration of statistical and geospatial information.
15. *Welcomed* the proposal to integrate and display the administrative geographies of MEGA in the Statistics Division of ECLAC (CEPALSTAT) geoportal as a basis for the geocoding of the statistical data that ECLAC administers and disseminates in the context of its institutional mandate. This integration will support the move toward having a unique platform for the dissemination of disaggregated statistical data in the region, a result of collaboration between the statistical and geospatial community in the Americas.

## **VI Strategic Framework for Geospatial Information and Services for Disasters**

16. *Encouraged* Member States to implement the Strategic Framework for Geospatial Information and Services for Disasters and its five Priorities for Action at the country level, together with the GSGF and the UN-IGIF, their implementation guides, and other complementary tools.

## **VII Geodetic Reference Frame for the Americas**

17. *Urged* Member States and relevant regional organizations to support the strengthening of the United Nations Global Geodetic Center of Excellence (UN-GGCE), located at the UN Campus in Bonn, Germany, and to actively participate to ensure the exchange of experiences and good practices that facilitate the implementation of the Global Geodetic Reference Frame (GGRF) in Member States, as well as globally.
18. *Encouraged* Member States to increase the incorporation of Global Navigation Satellite System (GNSS) stations into the Geodetic Reference System for the Americas (SIRGAS) network of continuous operating reference stations (CORS), as well as altitude and gravity stations throughout the Americas, to contribute to the GGRF.
19. *Urged* Member States to develop geodetic capabilities within the Americas and make the necessary efforts to link and align their national geodetic infrastructures with the International Terrestrial Reference Frame (ITRF) and the International Height Reference Frame (IHRF) for the stability and sustainability of the GGRF.

## **VIII Working Groups of UN-GGIM: Americas**

20. *Approved* the continuation of the four working groups and their memberships and coordinating teams that had been operating prior to the formation of the new Board of

Directors of UN-GGIM: Americas. *Agreed* to retain the Working Group on the Integration of Statistical and Geospatial Information, the AN-Americas and the PSN-Americas and to establish a regional working group on geospatial information for effective land administration, and in this regard, requested Member States to ratify their representatives to these working groups.

## **IX Tenth Session of UN-GGIM: Americas**

21. *Approved* the convening of the Tenth Session of UN-GGIM: Americas on 18, 19 and 20 October, 2023, in Santiago de Chile.

### **CHAPTER IV: REPORT OF THE SESSION**

#### **1. Session 1: Presentation of Regional Reports**

The President of UN-GGIM: Americas Ms. Sofía Nilo Crisóstomo of SNIT-IDE de Chile reported on the activities carried out during the intersessional period, referring to the working groups, associated networks and regional collaboration initiatives. The Statistics Division of ECLAC, in its new role as Technical Secretariat, presented the report on geospatial activities in the Americas for the same period.

The UN-GGIM: Americas at its Ninth Session took note of the report delivered by its President and by the Statistics Division of ECLAC.

#### **2. Session 2: Presentation of new tools for the dissemination of Regional Geospatial Information**

The President of UN-GGIM: Americas and the Statistics Division of ECLAC presented the new UN-GGIM: Americas website, implemented by ECLAC technical teams and hosted on its institutional servers. This updated version includes the contents of the original site and displays them under the design and administration parameters used by ECLAC for the sites of its subsidiary bodies.

In addition, the Statistics Division of ECLAC presented the SDI-Americas website, as a tool for disseminating various existing geospatial information resources in the region, including information layers, technical documents, map services and links to the websites of the national spatial data infrastructures of the countries, among others.

In this same session, the representative of the Andean Development Corporation (CAF) and the Secretary General of the Pan American Institute of Geography and History (PAIGH) presented and referred to the creation and maintenance of the tool for the GeoSUR platform, and its valuable contribution toward the process of transferring the information assets to the SDI-Americas website. The tool was conceived as a regional public good to serve Member States.

The Statistics Division of ECLAC suggested a need to establish a collaborative governance mechanism for these sites and tools, a task that would be assumed by the Board of Directors of UN-GGIM: Americas, in the case of the website of UN-GGIM: Americas. For the SDI-Americas website, the need to establish an editorial committee made up of UN-GGIM: Americas, ECLAC, PAIGH and SIRGAS, in collaboration with AmeriGEO and CAF. ECLAC also stressed the urgent need to formulate a plan for updating geospatial information generated from national spatial data infrastructures (NSDIs) to ensure documentation and accessibility from the SDI-Americas website.

### 3. Session 3: Situation, needs and challenges of the Member States of the Regional Committee

The President of UN-GGIM: Americas delivered a presentation on the work plan of UN-GGIM: Americas between 2022-2025, specifying the direction that has been given to the program, fundamentally oriented towards the implementation of the global frameworks and guide established by UN-GGIM.

In the discussion that followed, Member States stated that, after the difficulties and adversity caused by the pandemic over the last two years, the challenging time opened an opportunity to increase awareness regarding the value of geospatial information for decision making. They also stressed the importance of having disaggregated data in the territory and also the need to enhance the need to expand an ecosystem of georeferenced data through innovative methods, the use of artificial intelligence, big data and others.

Among the opportunities that are outlined in the 2022-2025 work plan, Member States indicated that the proposals created opportunities to reinforce national geospatial processes based on the implementation of the UN-GGIM global frameworks. In addition, the work plan will strengthen cooperation between different public, private and academic actors, promote cooperation between countries and improve interoperability.

Member States expressed their interest and willingness to collaborate in the activities planned by the working groups, indicating that the UN-IGIF is a priority for the region. In this regard, they noted that the incorporation of the strategic pathways of UN-IGIF into national geospatial information policies is a fundamental requirement to advance these processes.

Finally, the Member States expressed interest in collaborating with all the working groups, in consultation and cooperation with the networks (academic and private sector), and also contributing to the enrichment of the regional platforms for the dissemination of geospatial information.

The UN-GGIM: Americas at its Ninth Session took note of the presentation by the President of UN-GGIM: Americas.



#### 4. Session 4: Thematic Session "Integrated Framework of Geospatial Information"

Ms. Deirdre Dalpiaz Bishop from US Census Bureau, Co-Chair of the High-level Group of the Integrated Geospatial Information Framework (HLG-IGIF), introduced and led the session.

Ms. Cecille Blake, representative of the UN-GGIM Secretariat spoke on the mandate, evolution and architecture of UN-GGIM. She gave an overview of the UN-IGIF, described some of the global actions and contributions to implement the UN-IGIF, and highlighted the countries which are developing and have developed their Country-level Action Plans.

Next, Ms. Deirdre Dalpiaz Bishop, presented on the activities that are being conducted by the HLG-IGIF for the promotion, coordination and supervision of the implementation of the UN-IGIF globally. She referred to the progress of the HLG-IGIF's Strategic Plan, its Work Plan and the associated Work Groups. She also encouraged Member States in the region to participate and contribute to the HLG-IGIF working groups on communication and sustainable financing.

Ms. Isis Tejada from National Geographic Institute Tommy Guardia, Panama, coordinator of the IGIF-Americas Working Group, made a presentation on the reformulation of the old SDI Working Group, its objectives and proposed activities, and its current constitution as the IGIF-Americas Working Group. She presented the IGIF-Americas Working Group's Work Plan and the products and results to be expected. The Plan focuses on the development of capacities and tools to support Member States in the knowledge and implementation of the UN-IGIF. Ms. Isis Tejada encouraged Member States to actively collaborate with the Working Group in order to achieve concrete progress in the implementation of the UN-IGIF in the Americas.

Continuing with the session, Mr. John Kedar and Ms. Inés Matos, representatives of the SDG Data Alliance and PVBLIC Foundation, presented on the general aspects of the SDG Data Alliance initiative, the applied methodology, and referred to how Action Plans are being developed in the pilot countries for the implementation of the UN-IGIF.

Finally, the session closed with open discussion where the Member States, shared their experiences, needs and challenges that must be addressed in order to implement the UN-IGIF.

UN-GGIM: Americas appreciated the efforts by the HLG-IGIF and the UN-GGIM Secretariat to support the implementation of UN-IGIF at the national level, with the purpose of help countries achieve sustainable social, economic and environmental development, leaving no one behind.

## 5. Session 5: Regional Collaboration Thematic Session

The introduction and moderation of this session was conducted by Mr. Sergio Cimbaro, National Geographic Institute, Argentina and Member (South America) on the UN-GGIM: Americas Board of Directors.

The first presentation was made by Ms. Simone Lloyd, National Spatial Data Management Branch (NSDMB) of Jamaica, and Member (Caribbean) on the UN-GGIM: Americas Board of Directors. She presented CARIGEO and the work carried out during the intersessional period. She spoke about the proposal to implement a Caribbean mechanism to strengthen institutional arrangements, support greater awareness, and build capacities to assist countries in the development of their national geospatial initiatives.

She also raised the need to establish a comprehensive work structure, and suggested inviting organizations such as: the Caribbean Community (CARICOM), the Caribbean Disaster Emergency Management Agency (CDEMA), the Caribbean Development Bank (CDB), the Caribbean Community Climate Change Center (CCCCC), the Caribbean Institute of Meteorology and Hydrology (CIMH), the Organization of Eastern Caribbean States (OECS), the University of the West Indies (UWI), and others, to become partners in facilitating progress in the use of geospatial information, knowledge sharing, and technology adoption consistent with regional priorities.

Additionally, she encouraged Member States and Territories in the Caribbean to actively participate in CARIGEO, recognizing the need to identify and use innovative and effective mechanisms to strengthen communication and raise awareness about CARIGEO and its benefits in the geospatial development of the Caribbean.

The second presenter was Ms. Rosario Casanova, Chair of AN-Americas. She presented on the contributions of the AN-Americas and highlighted contribution and participation in the Joint Action Plan Capacity Building Working Group, the Capacity Development Working Group of the HLG-IGIF, and the work on ethics in the use of geographic data. Regarding future contributions, she proposed promoting opportunities related to regulatory, educational and capacity development aspects, in addition to seeking joint training opportunities with PSN-Americas.

PSN-Americas was represented by Ms. Valrie Grant who made a presentation on the progress of the network and its path forward. Regarding future actions, PSN-Americas intends to become a strategic member of the IGIF-Americas Working Group and also of the Working Group on the Strategic Framework for Geospatial Information and Services for Disasters (GISD) for the Americas. Ms. Grant proposed designing and developing a geographic-focused regional podcast that highlights the region's work and priorities and enhances the effectiveness of collaboration between the private sector and academia to ensure sustainable business outcomes. To this end, a bridge could be established between schools and the world of work, connecting students with companies based on their interests and career goals, thus providing students with hands-on projects to gain real-world experience.

At the end of the first part of the session, interventions were offered by Member States, who commented, suggested and expressed concerns on the matters discussed.

The introduction and moderation of the second part of the session was managed by Ms. Rosario Casanova, Chair of AN-Americas.

The first presentation of this second session was made by Ms. Sonia Alves from IBGE-Brazil as Chair of SIRGAS who noted the SIRGAS relationship to the Working Group on Geodetic Reference Frame for the Americas and interactions for sustainable geodesy in the Americas. In particular, she commented on the region's geodetic infrastructure, the work on an international height reference frame, the results of the survey on geodetic knowledge and capabilities in the region, and the workshops that were held intersessionally.

Mr. Antonio Campuzano, Secretary General of PAIGH, presented an intervention which referred to the actions carried out by PAIGH to support the application of the UN-IGIF. In particular, he noted the commitments accepted during the twenty-third assembly of the PAIGH, in which it was agreed to support the efforts of the HLG-IGIF. The PAIGH work plan and associated groups continued to align the objectives and goals of the PAIGH with the UN-GGIM and especially with UN-GGIM: Americas, and to support the UN-IGIF in the Americas so that member states find sustainable solutions for social, economic, and environmental development.

Ms. Angélica Gutiérrez, Co-Chair of the Group on Earth Observation (GEO) in the Americas (AMERIGEO), noted AmeriGEO's contribution to the Joint Action Plan. In particular, she addressed the activities that have been carried out under the Aguascalientes Declaration and the Joint Action Plan and its three working groups: Communication; Capacity Development; and Knowledge, Data and Information. She also highlighted the work that GEO is doing globally to develop a set of tools that are aligned with the United Nations objectives for disaster risk reduction, promoting Earth observation, using tools, services and methodologies to reduce gaps. information on hazards, vulnerability and exposure at the country level. Finally, she referred to the potential and the range of courses available in the Beta version of the Inter-American Academy for Capacity Development.

At the end of the second part of the session, interventions were offered by Member States, who commented, suggested and expressed concerns on the matters discussed.

UN-GGIM: Americas recognized the need to incorporate a comprehensive ecosystem approach toward geospatial information management that involves different regional organizations, to facilitate progress in the use of geospatial information, knowledge exchanges and technology adoption in line with regional priorities.

It also took note of the offer made by Cuba to provide technical support to other countries in the region and encourages Member States to explore partnerships to support capacity building in geospatial information management, taking advantage of existing technical resources and expertise in the Americas.

And finally, the Member States recognized the work carried out by the PSN-Americas, its contribution to the activities of UN-GGIM: Americas, and its support for cooperation initiatives such as CARIGEO.

#### 6. Session 6: Thematic Session “Looking to the Future”

The session was introduced and moderated Ms. Simone Lloyd, a Member (Caribbean) on the UN-GGIM: Americas Board of Directors.

The first presentation was made by Ms. Andrea Diniz Da Silva, from the IBGE-Brazil National School of Statistical Sciences, who spoke about the research and progress of the Regional Hub for Big Data in Brazil. She encouraged Member States to contribute ideas related to the use of Big Data, such as satellite images and other sources, to inform the Sustainable Development Goals and the response to natural disasters within the Americas. She also referred to the importance of using more effective and efficient technologies to develop, maintain and disseminate geospatial data and encouraged further exploration and use of open source tools and software, as appropriate.

Next, Ms. Gabriela García Seco from INEGI-Mexico and Member (North America) on the UN-GGIM: Americas Board of Directors, made a presentation on the Digital Land of the Americas initiative, mentioning among its objectives: measuring the social impact of a changing world; enable economic growth and business opportunity through the use of free and open data and tools; and inspire community engagement by providing tools, data, services and capacity building. She also referred to the workshops on Earth observations held during the intersessional period and the dissemination of experiences from some countries, carried out jointly with other organizations. She also commented on the project that is being carried out within the initiative "Strengthening Geospatial Capacities in the Caribbean", and which is intended to be extended to Central America. She stated that the objective is to strengthen cooperation and partnerships for the development of science and the application of space technologies, and that the project will strengthen the technological infrastructure, develop a capacity development program and dissemination for decision-making.

Mr. Horacio Castellaro, from Statistics Division of ECLAC, presented progress on the technological tools developed to support the dissemination of geospatial information in different areas and as support to the NSDIs of Member States. Among these, he highlighted some open source tools for the management and deployment of geospatial information, such as the COVID geoportal that allowed viewing the different measures that countries were implementing to face the pandemic in terms of mobility, education, economy and others; the geospatial component of the CEPALSTAT platform for the deployment of geocoded statistics, with different adaptations according to the user's needs; and, finally, the implementation of statistical geoportals in national statistical offices, to support the implementation of the principles of the GSGF. Mr. Castellaro also noted the work related to capacity building and referred to a set of virtual courses available on geographic information systems, geocoding, geographic standards, use of satellite images to produce statistics, and web cartography.

At the end of the session, interventions were offered by Member States, who commented, suggested and expressed concerns on the matters discussed.

#### 7. Session 7: Thematic Session "Global Statistical and Geospatial Framework"

The session was introduced and moderated by Ms. Gabriela García Seco, Member (North America) on the UN-GGIM: Americas Board of Directors.

Mr. Claudio Stenner, IBGE-Brazil introduced the global perspective on the integration of statistical and geospatial information. In particular, he explained how the GSGF provides guidelines for integrating data, standards, and methodologies drawn from the statistical and geospatial communities through the application of its five principles and key supporting elements, and facilitates the production of harmonized and standardized geospatial and statistical data. Mr. Stenner noted that the resulting data can be integrated with statistical, geospatial, and other information to inform and facilitate evidence-based decision-making, and to support global challenges such as the 2030 Agenda.

Next, Ms. Sandra Moreno, National Administrative Department of Statistics of Colombia (DANE) referred to ongoing activities to strengthen the integration of statistical and geospatial information in the Americas. She initially presented the 2022-2025 Work Plan of the Working Group on the Integration of Statistical and Geospatial Information in the Americas and then addressed the main limitations in the region for this integration process. She also detailed the next steps in the development of the MEGA project oriented towards the search and provision of higher levels of disaggregation in the fundamental geographic data used for the geocoding of statistical data. Likewise, she referred to the advances in the generation of version 2.0 of the MEGA, which incorporates socio-demographic, labor market, poverty and housing issues. Finally, she referred to a survey that will be conducted in the region in the first quarter of 2023 with the purpose of diagnosing the levels of disaggregation of geographic information available at the country level to geocode statistical data. The survey will provide the input to formulate and implement a proposal for the incorporation of additional geostatistical levels to the MEGA.

In the presentation by Mr. José Manuel García, Simón Bolívar Geographic Institute of Venezuela (IGVSB), he recognized that national geographic and statistical system as a good practice in the implementation of the principles of the GSGF. He also commented on the potential of the technological platform that supports this system and its application in National Population and Housing Census.

Next, the Statistics Division of ECLAC, represented by Mr. Daniel Taccari, presented the CEPALSTAT platform and its geospatial component as a basis for the geocoding of the statistical data that ECLAC manages and disseminates in the context of its institutional mandate. In his presentation, he referred to the benefits of integrating and deploying MEGA's administrative geographies in the geoportal of the CEPALSTAT platform. CEPALSTAT is a unique platform for the dissemination of disaggregated statistical data in the region, as a result of collaboration between the statistical and geospatial community in the Americas region.

Finally, a discussion was held on the regional needs and challenges for the implementation of the GSGF, Member States commented, suggested and expressed concerns on the matters discussed.

8. Session 8: Thematic Session "Strategic Framework of Geospatial Information and Services for Disasters"

This session was moderated by Mr. Claudio Stenner, from the Brazilian Institute of Geography and Statistics of Brazil (IBGE-Brazil).

The first presentation was made by Ms. Simone Lloyd, NSDMB of Jamaica, and Member (Caribbean) on the UN-GGIM: Americas Board of Directors, who spoke about the general aspects of the Strategic Framework on Geospatial Information and Services for Disasters and how it can help countries achieve governance, capacity development, data management, use of technology platforms and resource mobilization for risk reduction and disaster management at the national and global levels.

The next presentation was given by Ms. Rosa Cuesta, from the Ecuadorian Military Geographic Institute, who, on behalf of Ecuador and Brazil, spoke about the activities proposed by the Working Group on the Strategic Framework on Geospatial Information and Services for Disasters in the Americas. As reported by Ms. Cuesta, the objectives defined by the Working Group were: the creation of a "memory hub" to promote and improve awareness of adverse natural events that have caused disasters in the countries; determine the minimum layers of geospatial information necessary to deal with a disaster, defining the most recurrent in the region; and finally, to make a record of good practices in the use of geoinformation in response to disasters.

Mr. Eric Loubier, of the Canadian Center for Mapping and Earth Observation, gave a presentation on the Canadian experience in building geospatial infrastructures to support political priorities for decision-making in his country. In particular, he referred to the initiatives that have been carried out to protect homes and communities from the impacts of climate change and to guarantee the safety of communities through increased preparation for forests fires. In his presentation, he highlighted products such as: the flood risk identification and mapping program, the forest fire-fighting satellite system, the standards innovation program, and the integration of geospatial and statistical layers.

Next, Mr. Cayo de Oliveira, IBGE-Brazil, made a presentation on the mapping and characterization of population in high-risk areas in Brazil. Specifically, he referred to the institutional and political strengthening that his country has carried out for disaster management and the joint project that has been led by the National Center for Monitoring and Alerts of Natural Disasters (CEMADEN) and IBGE-Brazil to integrate geological soil information and population information to assess the vulnerability of people who are located in high-risk areas. He also highlighted how this project benefited from the GSGF's recommendations.

Ms. Rosa Cuesta, Ecuadorian Military Geographic Institute, then spoke about the management of geospatial information in response to disasters in Ecuador, specifically referencing the earthquake that occurred in 2016. She referred to the actions carried out by her Institute and the deployment of its technical capacity to face the emergency. She indicated that the information generated was made available in the Institute's Geoportal, which supported informed decision-making. Among the products generated for this event, she highlighted: the multi-temporal comparison of images, the assessment of affected buildings, the statistical reporting on impacted areas, among others.

Finally, a discussion was held among the Member States, with the purpose of exchanging comments, suggestions, and concerns on the matters presented.

#### 9. Session 9: Thematic Session "Geodetic Reference Frame for the Americas"

Mr. Sergio Cimbaro, Member (South America) on the UN-GGIM: Americas Board of Directors moderated this session.

The first presentation was made by Mr. Dan Roman, US National Geodetic Survey and Chair of the Education, Training and Capacity Development Working Group of the Subcommittee on Geodesy (SCoG). In his presentation, he referred to the updates from the SCoG in relation to the Global Geodetic Reference Frame (GGRF). He also highlighted the economic and scientific importance and growing need for an accurate and stable GGRF for the wellbeing of the planet. Mr. Roman indicated that the GGRF allows for the interrelationship of measurements made anywhere on Earth and in space, combining geometric position determination and observations relating to the gravitational field. The GGRF serves as a base and reference of the place and altitude for geospatial information, used in many applications of society and Earth sciences. Among these, sea level and climate change monitoring, natural hazard management, disasters, and a host of industrial applications (including mining, agriculture, transportation, shipping, and construction) where precise positioning introduces efficiencies.

Next, Ms. Sonia Alves, IGBE-Brazil and Chair of the Working Group on Geodetic Reference Frame for the Americas and also Chair of SIRGAS, referred to the status of implementation of the GGRF in the Americas and the importance that countries implement UN General Assembly Resolution 69/266 "A global geodetic reference framework for sustainable development" (26 February, 2015). In her presentation, she invited Member States to make the necessary efforts to link and align their national geodetic infrastructures towards the International Terrestrial Reference Frame (ITRF), International Height Reference Frame (IHRF) and International Terrestrial Gravity Reference Frame (ITGRF), in order to ensure the development, sustainability and promotion of the GGRF; and encouraged the countries of the region to increase the incorporation of GNSS stations into the SIRGAS continuous operation reference station network, as well as height and gravity stations throughout Latin America and the Caribbean, with the aim of achieving the implementation of the GGRF in all the Member States.

Member States in their interventions, commented, suggested and expressed concerns about the subjects presented.

UN-GGIM: Americas in its Ninth Session took note of decisions 11/104 and 12/106 of eleventh and twelfth session of UN-GGIM respectively related to the establishment of UN-GGCE towards a stable and sustainable GGRF.

UN-GGIM: Americas also recognized the effort made by SIRGAS and the Member States to implement the GGRF in their respective countries, the training and joint work of the professionals and technicians of all the countries to maintain the most up-to-date geodetic reference frame for the Americas.

## CHAPTER V: ACKNOWLEDGMENTS

UN-GGIM: Americas at its Ninth Session, held on November 28, 29 and 30, 2022 in person:

1. *Thanked* the Andean Development Corporation (CAF) and the Pan-American Institute of Geography and History (PAIGH) for their efforts to create and maintain the predecessor tool, the GeoSUR platform, and its valuable contribution in the process of transferring the information to the SDI-Americas website.
2. *Thanked* the Member States for collaborating with the working groups of UN-GGIM: Americas in coordination and cooperation with the networks (academic and private sector), and also for contributing to the enrichment of the regional platforms for the dissemination of geospatial information.
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