XII Session UN-GGIM: Americas

Update for 12th Session

GeoAI Community of Practice

UN-GGIM:Americas
REGIONAL COMMITTEE OF UNITED NATIONS ON GLOBAL GEOSPATIAL INFORMATION MANAGEMENT FOR THE AMERICAS

UNITED NATIONS
ECLAC

Main
Progress and Achievements

Terms of Reference

Survey & 2025-26 Work Plan

Module 1: GeoAI, an Introduction

Terms of Reference

ToR Context

Resolution 10/3 “Exploring Geospatial Artificial Intelligence Opportunities”

a) *Recognizes* that Geospatial Artificial Intelligence (GEO-AI) represents **a significant opportunity to enhance the production, updating, availability and harmonization of geospatial data assets in the Americas**, given the growing popularity of Artificial Intelligence (AI) which has opened new doors to strengthen work capabilities in the geospatial field;

b) *Recommends* the **establishment of a task team (or Working Group) to facilitate the adoption and operationalization of GEO-AI technology** across members states, and the private sector of the Regional Committee;

ToR Context

Resolution 10/3 “Exploring Geospatial Artificial Intelligence Opportunities” Continued

c) *Takes note* with satisfaction the commitments from Canada, Costa Rica, Brazil, United States, Panama, Honduras, Argentina, Chile, the Academic Network, Private Sector Network, PAIGH and Esri to contribute to the work to be done to advance the GEO-AI work item.

ToR Context

Resolution 10/3 “Exploring Geospatial Artificial Intelligence Opportunities” Continued

d) *Recommends* Canada, in close collaboration with the Member States and stakeholders who have expressed their commitment (see v), undertake the development of a programme of work for the new task team (or Working Group), which, inter alia, should take into account:

i. The mandate and structure of the Team;

ii. A work plan to support technology transfer, training and capacity building of GEO-AI;

iii. Investigation of funding mechanisms available to support adoption and implementation of GEO-AI technology;

iv. A suitable planning time frame;

v. The focus and core goals of its parent body, UNGGIM Americas;

ToR Context

Resolution 10/3 “Exploring Geospatial Artificial Intelligence Opportunities” Continued

e) *Decides* that the programme of work shall be circulated to Member States of the Americas for consideration prior to adoption.

ToR Context

Membership: Representatives from 17 Member States + ECLAC + PSN + ANA

- In Fall 2024, a task-team drafted the initial ToR and gathered feedback during two meetings.
- The committee formally decided to structure the group as a Community of Practice (CoP).
- **The CoP model encourages collective contributions from all members; participants are invited to contribute according to their ability and expertise.**
- The ToR were reviewed in December 2024 and endorsed by CoP members in January 2025.

Key ToR Content

5. Governance and Structure

The GeoAI CoP will operate under the guidance of UN-GGIM: Americas and adhere to the governance principles inter alia:

5.1 Facilitators

A maximum of three (3) facilitators to be identified, on a voluntary basis, from Member States of UN-GGIM: Americas;

Facilitators will serve for two (2) years, renewable on an as-needed basis by a consensus of members;

Responsible for:

- Overall strategic direction, coordination and reporting;
- Convening periodic meetings of the CoP, frequency as determined by members;
- Disseminating information among the CoP;
- Other activities in support of the CoP, as required.

Survey and 2025-26 Work Plan

CoP GeoAI Survey

To support Work Plan development, the ToR Task Team conducted a survey to assess:

- The current level of GeoAI adoption across the Community of Practice (CoP)
- Use-cases of interest identified by members
- Availability of relevant data and priority areas

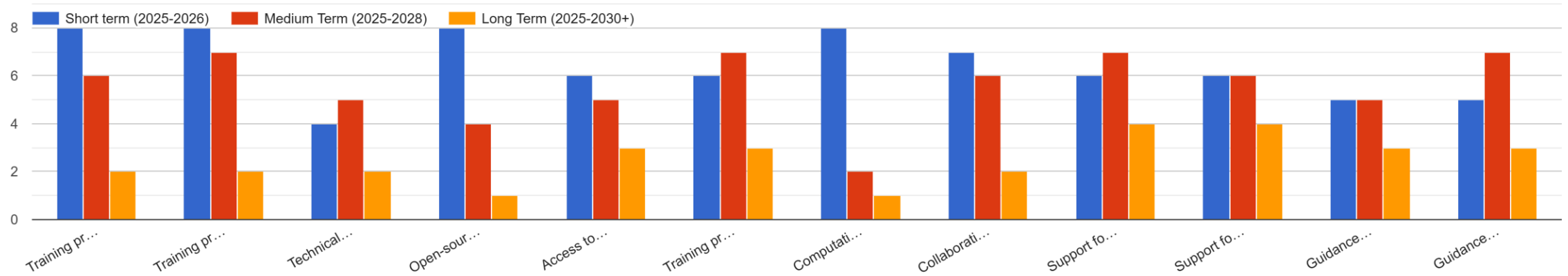
- 10 CoP participants responded to the survey
- Full results are included in the Annex of the Work Plan

Key Survey Results: 3 Types of Adopters

Early-Stage	Intermediate	Advanced
Possess intermediate to advanced AI/ML capabilities	Adequate data and IT infrastructure	Limited ML/DL experience and potentially minimal infrastructure
Have access to large datasets	Growing ML/DL expertise	Some access to workstations, but may lack cloud access or labeled data
Currently deploying GeoAI solutions	Beginning to experiment with deploying GeoAI solutions	

Key Survey Results: Support Needs Identification

8. What type of support would be most beneficial to your organization in advancing geospatial AI capabilities and when do you think it would be most useful? (Select all that apply)



Training on GeoAI and information on computational requirements identified as priorities

Work Plan Objectives

Drawing from these results, a Work Plan sub-group drafted and revised the current document, endorsed by CoP membership in September 2025.

GeoAI Fundamentals Training Sequence

Six Technical modules, to develop AI skills. Led by Canada, US (USGS) & PSN

Communications

Engagement with other regional committees. Led by the Secreteriat & ECLAC

Technological and Data Prerequisites

Documentation, led by United States (USGS)

Required Infrastructure

Documentation led by PSN

Training Program

Date	Module	Module Lead(s)	Description
Oct/Nov 2025	GeoAI an Introduction: Use-cases from Across UN-GGIM: Americas Members	Canada, with support of other GeoAI adopters from UN-GGIM: Americas	• Overview of GeoAI • GeoAI Landscape: Use cases and trends • Familiarize with potential for Geospatial AI
Jan 2026	Geospatial Data Fundamentals	Private Sector Network	• Data organization, preparation, annotation, management • Understand data requirements, technical prerequisites for ML/DL • Overview of software tools and programming basics (Python, Jupyter, QGIS/ArcGIS)
Feb 2026	Introduction to ML/DL theory	Canada	• Introduction to AI/ML concepts in a geospatial context • Key algorithms and architectures • Common concepts in machine learning operations
Mar 2026	Practical training on applications of ML/DL on Numerical, Non-Image Data	Canada	• Further understanding of ML/DL through application to numerical, non-image data. • Strengthen skills and knowledge of core concepts on data with simple structure

Training Program

Apr 2026	Practical Training on Applications of GeoAI to High-Resolution Optical Imagery	Canada	• Introduction to image analytics • Practical case-studies for developing an AI model to extract information from optical imagery
May/Jun 2026	Practical Training on Applications of GeoAI to LiDAR Point Clouds and High-Resolution Elevation Models	United States (USGS)	• Introduction to analysis of high-resolution terrain data • Practical case-studies for developing an AI model to extract information from or to leverage topographic data

Sep/Oct 2026	Operational Automation –
	Theory and Practice
		United States (USGS) with support from Canada	• Theory
			  ○ Automation and MLOps principles in geospatial workflows
			  ○ Cloud platforms for scalable AI (e.g., Google Earth Engine, AWS, Azure)
			• Practice
			  ○ Challenges & Opportunities
			  ○ Upscaling

Oct/Nov 2026	Evaluate & Discuss Work Plan Progress		

Module 1: GeoAI, an Introduction

Module 1: GeoAI an Introduction

Friday, 7 November 2025

08:30 – 10:00 A.M, Medina Room

This side event officially launches the GeoAI Community of Practice Work Plan.

It introduces Work Plan components and delivers a first training module through accessible, non-technical presentations.

- **Potential of GeoAI**
- **Overview of GeoAI**
- **GeoAI Use-Cases**
- **Coordination of CoP**

Acknowledgements

Many thanks to:

- Those who attended meetings, contributed to drafting, reviewing and writing the ToR, Survey, and Work Plan.
- Those who are leading Work Plan items and presenting in Module 1, and to ECLAC and the Secretariat for their support for organizing the hybrid session.
- The Secretariat for their support and for ensuring interpretation of meetings.

For Discussion and Endorsement:

Formal approval and active engagement:

- **GeoAI Community of Practice**
- **Terms of Reference**
- **2025-26 Work Plan**

Identification of three facilitators from Member States

See you Friday!

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THANK YOU!

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