



United Nations  
Global Geodetic  
Centre of Excellence



## Geodesy Capacity Development Workshop for Africa on Transitioning to a Modern Geospatial Reference System

19-23 May 2025  
Nairobi, Kenya

United Nations Global Geodetic Centre of Excellence  
Statistics Division, Department of Economic and Social Affairs

### Concept Note

#### Introduction

The United Nations Global Geodetic Centre of Excellence (UN-GGCE) invites surveying and geodetic professionals working for, or with, Member State government agencies in Africa to participate in its Geodesy Capacity Development Workshop, in Nairobi, Kenya. This workshop will assist participants understand how to collaborate with colleagues in government to transition to a modern Geospatial Reference System (GRS)<sup>1</sup>.

#### Background

The UN-GGCE envisions the future where all countries have a strong support for geodesy, enabling them – together – implement the General Assembly Resolution 69/266 and to accelerate the achievements of the Sustainable Development Goals and derive social, environmental and economic benefits. Key to achieving these benefits is the establishment of a modern GRS on which geospatial data can be aligned and combined for improved decision making.

This workshop is part of the Geodesy Capacity Development Workshop series, which serves as a platform to strengthen global geodetic capabilities, ensuring that all Member States are equipped to support sustainable development through accurate and reliable geospatial information. The workshops will be provided across the five regions: Africa, Americas, Arab States, Asia-Pacific and Europe. Each workshop will run for five days (Monday to Friday) and will take place in person either at the UN-GGCE facility in Bonn, Germany, or within the respective region. Please note that there will be no online or remote participation available, however, the proceedings of the workshops will be open access.

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<sup>1</sup> A modern Geospatial Reference System (GRS) is the collection of: datums, used to define latitude, longitude and height; infrastructure, including a network of Global Navigation Satellite System Continuously Operating Reference Stations and survey marks to provide an authoritative and accurate network in support of positioning applications; models, describing dynamic, geophysical processes that affect spatial measurements; and standards, to ensure positioning information is Findable, Accessible, Interoperable and Reusable.



## Workshop Objectives

The primary objectives of the workshops are to:

- Communicate the importance of geodesy by equipping participants with the necessary tools and strategies to effectively communicate the value of geodesy to decision-makers, supporting the aim for increased investment in geodetic infrastructure and capacity.
- Provide guidance on modern GRS and describe the steps to create, access, use and sustain a modern GRS. This includes technical guidance with hands-on sessions to demonstrate important geodetic processes including geodetic adjustments and developing transformation parameters.
- Assist with the development of international geodetic standards, particularly for the ISO Geodetic Register and EPSG Register.
- Provide guidance on establishing the necessary governance structures within governmental frameworks to oversee and manage the modernization of a country's GRS.
- Assist in the development of a Communications and Stakeholder Engagement Plan.

## Workshop Highlights

- **Interactive Sessions:** Hands-on training with the latest geodetic technologies and various geodetic methodologies.
- **Expert Discussions:** Engage with leading experts through dynamic panel discussions and other interactive sessions. Exchange of experience with professionals from different Member States and institutions.
- **Technical Assistance:** Receive guidance on developing practical technical manuals and communication strategies tailored to the national context.
- **Networking Events:** Build connections with professionals from your region and beyond, facilitating the exchange of best practices and innovative ideas.

## Provisional Agenda

The agenda is structured in building blocks that systematically address the WHY, HOW, WHO, WHAT, and WHERE of modernizing the geospatial reference system.

	Monday	Tuesday	Wednesday	Thursday	Friday
Session 1	Opening, Overview and Introduction	HOW - Profiling the current status of national GRS	HOW - Using transformation parameters, plate motion and deformation models	WHERE - Making geodesy understandable and visible	WHO - Identifying the weakest link in the chain of command
Session 2	WHY - The importance of a Geospatial Reference System (GRS)	HOW - Reviewing geodetic adjustments	HOW - Developing national geoid models and height datums	WHERE - Crafting effective communication strategies for decision-makers	WHY - Forward looking strategies for geodesy
Session 3	HOW - GRS infrastructure	HOW - Creating a new national datum	..continuation	WHAT - Developing business cases for increased investment in geodesy	Stronger. Together. UN-GGCE roadmap for GRS modernisation
Session 4	HOW - Identifying the current national GRS status	HOW - Introducing data sharing, standards and registers	WHAT - Addressing capacity development needs for the region	WHO - Governance structures for overseeing national GRS programs	Sharing the UN-GGCE's GRS roadmap
Session 5	WHO - Introducing regional geodetic collaborations	HOW - Applying data sharing, standards and registers	WHAT - Introducing international geodesy initiatives and partners	WHO - Developing governance structures and stakeholder engagement	Workshop reflection and feedback
Session 6	WHO - Developing regional geodetic collaborations	HOW - Using the ISO geodetic register, EPSG register and OGC standards	UN-GGCE Stronger. Together.		Closing

A detailed agenda and further details will be shared with the selected participants at a later date.

## Target Audience

The workshop is intended for:

- **Surveying or geodetic professionals and practitioners:** Individuals actively involved in geodetic work at a national or international level.
- **Government officials:** Representatives actively involved in technical geodetic processes and implementation.
- **Academics and Researchers:** Members of the academic community engaged in geodesy and related fields.
- **Representatives from geodetic organisations:** Individuals affiliated with professional bodies and organisations in the field of geodesy.

## Benefits of Participation

By attending, participants will:

- Develop tailored roadmaps for modernising their national geospatial reference system.
- Gain practical experience with geodetic technologies and methods.
- Network with international geodesy professionals and share best practices.
- Learn to effectively communicate the importance of geodesy to decision-makers.

## Application Process

Interested applicants should complete the online form at <https://forms.gle/1ZVFkjSS5ugpoJTbA> and submit the requested reference letter(s) to [un-ggce@un.org](mailto:un-ggce@un.org).

A detailed description of how to translate the form, outlining step-by-step instructions at [https://drive.google.com/file/d/16Tl8cfazWF7y\\_ZNC1AKnplil\\_go6amdO/view?usp=sharing](https://drive.google.com/file/d/16Tl8cfazWF7y_ZNC1AKnplil_go6amdO/view?usp=sharing).

Workshop attendees will be selected based on (but not limited to) the following criteria:

- Professional background and expertise
- Academic qualification
- Demonstrated practical technical skills
- Motivation for attending the workshop
- Affiliation with professional institutions / organizations / Member States
- Reference letter

Participants will be selected through a process that prioritizes diversity, equality, and inclusion, ensuring a broad representation of individuals from diverse backgrounds, perspectives, and experiences, with special attention to applicants from Least Developed Countries (LDCs)<sup>2</sup> and Small Island Developing States (SIDS)<sup>3</sup>. This approach will foster an inclusive environment that enriches the workshop experience for all participants.

**Deadline for the application is: 20 December 2024 at 18.00 CET**

## Participation

The workshop is an **in-person meeting** for Member States.

The selected participants will have their travel arranged and paid for by the UN-GGCE. Selected participants will be contacted directly regarding travel arrangements. Selected participants will receive a per diem / Daily Subsistence Allowance (DSA), which is intended to cover accommodation, meals, and incidental expenses.

Please note that while the DSA is provided to cover accommodation and other daily expenses, participants are responsible for making their own accommodation bookings and managing local logistics (e.g., transport to/from the meeting venue).

All participants are responsible for their own travel visas to get into Kenya including travel insurance as applicable.

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<sup>2</sup> <https://unctad.org/topic/least-developed-countries/list>

<sup>3</sup> <https://www.un.org/ohrlls/content/list-sids>

## Logistics

Region:	Africa
Dates:	19. - 23. May 2025
Location:	Nairobi, Kenya
Address	Parklands/Highridge, United Nations Ave, Nairobi, Kenia

The Workshop for Africa will run for five days (Monday to Friday) and will take place in person at UN-Habitat headquarter in Nairobi, Kenya. Please note that there will be no online or remote participation available. The Workshop will be conducted in English and French, and the Workshop materials will be in English only.

## Health and Safety

The workshop will adopt protocols in line with local and international standards.

## Further Information and Contact Details

For administrative matters and workshop arrangements, please contact

Ms. Walaa Allahham  
United Nations Global Geodetic Centre of Excellence  
Statistics Division, Department of Economic and Social Affairs  
United Nations  
Email: [walaa.allahham@un.org](mailto:walaa.allahham@un.org)

For substantive matters, please contact:

Mr. Nicholas Brown  
Head of Office, United Nations Global Geodetic Centre of Excellence  
Statistics Division, Department of Economic and Social Affairs  
United Nations  
Email: [nicholas.brown@un.org](mailto:nicholas.brown@un.org)

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