

GGOS Africa 2026 Kenya, Nairobi: Summary and Way Forward



GGOS-Africa

Global Geodetic Observing
System – Africa

GGOS Africa Secretariat

M Making **<** sure **>** it's possible



**science, technology
& innovation**

Department:
Science, Technology and Innovation
REPUBLIC OF SOUTH AFRICA



Opening Ceremony

- The Workshop opened with welcome and support messages from representatives of the GGOS Africa Secretariat, IAG, GGOS, UN-GGCE, UN-GGIM-Africa, the Director, Survey of Kenya, and a keynote address by the VC of TUK.

- **Key Message:**

GGOS-Africa is now internationally recognised. Africa possesses the expertise, infrastructure and historical foundation for geodetic excellence; the priority now is to build a coordinated, sustainable and politically supported continental geodesy ecosystem through GGOS-Africa.

Session 1: Global & African Perspectives

- **Session Theme:** Status, history and future direction of geodesy globally and across Africa
- **Key inputs:**
 - The evolution of geodesy in Africa, and the historical foundations that led to AFREF and GGOS-Africa;
 - Governance, coordination and sustainability are now greater challenges than infrastructure provision;
 - The next steps should focus on operationalising and sustaining geodetic infrastructure and services;
 - Support for embedding geodesy within African Union and African Space Agency structures;
 - Recognition that advocacy and political engagement are essential for long-term sustainability

Session 2: GGOS Africa Founding Framework & ToR

- GGOS-Africa is a Continental Coordination Platform
- The coordination framework is built around several strategic pillars:
 - Geodetic and space geodetic infrastructure development.
 - Strengthening AFREF implementation.
 - Data sharing and accessibility.
 - Analysis centres and data processing capacity.
 - Human capital development.
 - Policy advocacy and stakeholder engagement.
 - International partnerships and collaboration
- The workshop is the starting point for implementation.
- Move from Discussion to Implementation.
- Evolve into an operational platform that delivers measurable outcomes.

Session 3: Infrastructure

- **Session Theme:** Status of geodetic and space geodetic infrastructure across the continent
- **Key Input:**
 - Substantial geodetic infrastructure exists across Africa, including CORS networks and observatories;
 - Need to strengthen coordination in operational continuity, data sharing, analysis capacity and identification of additional space geodesy sites;
 - Need to identify priority locations for future fundamental geodetic stations;
 - Need for improved continental infrastructure inventories and operational monitoring of infrastructure.

Session 4: Reference Frames and Height Systems

- Reaffirmation of AFREF as Africa's continental reference frame initiative;
- Identified the need for increased participation in AFREF data sharing and analysis activities;
- Highlighted the importance of developing a unified vertical reference systems across Africa;
- Governance, data sharing and operational continuity remain the key gaps in AFREF implementation.

Session 5: Country Presentations

- Countries shared their experiences and lessons from geodetic infrastructure development.
- Presentations from Ghana, Tunisia, Nigeria, Zimbabwe, Uganda and Cameroon showcased progress in establishing, modernizing and operating national geodetic infrastructure.
- Significant progress is being made in several countries through innovative funding and governance models.
- Public-private partnerships can support sustainable geodetic infrastructure development.
- Countries face similar challenges regarding governance, maintenance, standards and data sharing

Session 6: Geodynamics, Astronomy and Space Weather

- Presentations demonstrated the linkages of African geodesy to geodynamics, radio astronomy and space weather monitoring;
- Underscores the Multi-domain coordination approach in GGOS Africa;

Session 7: GGOS Affiliates



- The workshop virtually joined GGOS Days 2026
- Received updates from GGOS affiliates, including GGOS Africa.
- The central theme is strengthening national capacity and increasing contributions to international geodesy
- Emphasises the importance of networking, collaboration and knowledge-sharing.

Session 8: Human Capacity Development

- Developing the next generation of African geodesists to sustain and expand Africa's geodetic infrastructure, analysis capability and scientific leadership.
- Presentations highlighted current capacity, identified critical skills gaps, showcased existing training institutions, and proposed new mechanisms to develop a sustainable African geodetic workforce.
- The first continent-wide assessment of Africa's geodetic training capacity and skills found that several Geodesy-related programmes exist; gaps were identified in 5 critical skills domains.
- AFRIGIST is serving as a Pan-African centre of excellence for geospatial and geodetic education; funding, manpower and training equipment remain challenges.
- Proposal for regional training hubs with a common curriculum.
- Proposal for a Pan-African Geodetic Research Consortium as a dedicated continental postgraduate training and research mechanism.

Session 9: Analysis Centres

- Proposals on the establishment of a distributed analysis node network
- Collaborate with the UN-GGIM and AFREF so as not to duplicate efforts
- Leverage the High Performance Computing ecosystem that has been rolled out by the CHPC in some African countries and wherever else it is available.
- The starting point should be to assess the spread of available infrastructure and interest



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Way Forward



*Dankie
Enkosi
Ha khensa
Re a leboga
Ro livhuwa
Siyabonga
Siyathokoza
Thank you*

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