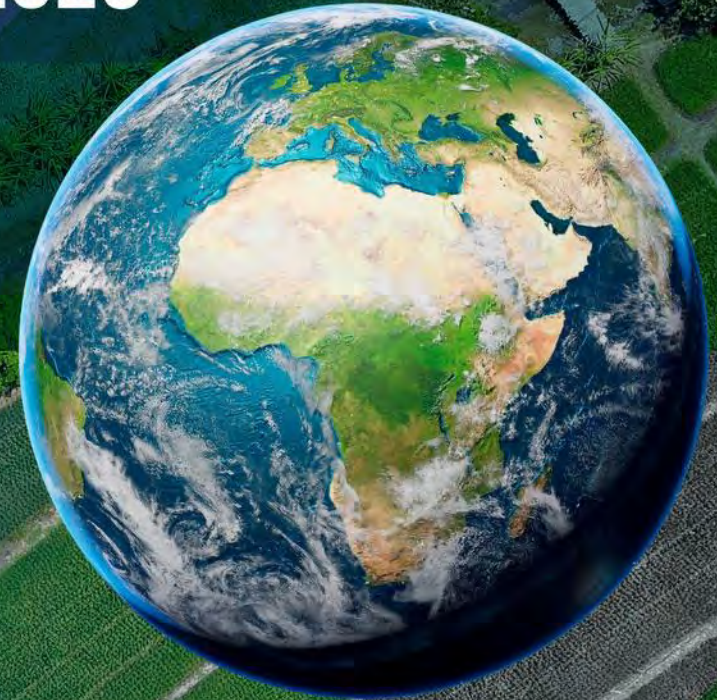


COMMUNITIES OF PRACTICE (COP)
INTEGRATED WORKSHOP AND TRAINING **2026**

SOUTH AFRICAN EARTH OBSERVATION AND SPACE YOUTH FORUM



INTEGRATED WORKSHOP

An initiative of the DSTI that is hosted and managed by the CSIR

Co-Chairs

Ms Sinesipho Ngamile



A **Junior Remote Sensing Scientist at the South African National Space Agency (SANSA)** Earth Observation Division. She holds a **Bachelor's degree in Geography, an Honours degree in Geography and Environmental Management, a Postgraduate Diploma in Project Management, and an MSc in Geography (Cum Laude)**, which focused on water quality monitoring using remote sensing. Since joining SANSA in 2019, she has contributed to science engagement, STEM promotion, and Earth observation initiatives before transitioning into remote sensing research in 2024. Sinesipho is actively involved in regional and international Earth observation and science engagement communities, including Digital Earth Africa and the South African GEO Youth Group, and is passionate about applying geospatial technologies to support environmental monitoring and evidence-based decision-making.

Dr Mncedisi Siteleki



Mncedisi Siteleki is a lecturer at the University of the Witwatersrand's School of Architecture and Planning. With a background in Geographic Information Systems (GIS) and Remote Sensing, Mncedisi leverages geospatial technologies to explore and interpret past and present landscapes. Mncedisi was instrumental in establishing the Spatial Analytics Lab at the University of the Witwatersrand (Wits University), where he led pioneering research in spatial data analysis. He has also conducted research in South Africa, Botswana and Zambia. His research extends into data visualization, employing machine learning and deep learning techniques to interpret various datasets.

An overview of the SOUTH AFRICAN EARTH OBSERVATION AND SPACE YOUTH FORUM (SA EO & SPACE YOUTH FORUM)

- The first GEO Youth Declaration was presented on November 10, 2023, at the Group on Earth Observations (GEO) Ministerial Summit in Cape Town, South Africa.

This led to the establishment of the SA EO & SPACE YOUTH FORUM:

- An inclusive national platform that empowers young people (**in all SST related disciplines**) to participate meaningfully across the Earth observation and space sectors.
- The forum brings together students, researchers, young professionals, entrepreneurs, and emerging leaders to collaborate, innovate, and contribute towards societal and environmental solutions.



Why the Youth Forum Matters

- Youth are not only future leaders but contributors to current solutions.
- South Africa requires a skilled and inclusive EO and space workforce.
- Youth participation strengthens innovation and sustainability.
- Young people can use EO and space technologies to solve real-world problems

South African Earth Observation
and Space Youth Forum



Investing in youth is investing in the future of South Africa's EO and space ecosystem.

Why the Youth Forum Matters

- “Youth are not only future leaders but contributors to current solutions.
- Youth participation strengthens innovation and sustainability.”

E.g., **Dr Yonwaba Atyosi**

1. Doctor of Philosophy in Geoinformatics from the University of Pretoria
2. Candidate Researcher (Precision Agriculture, CSIR)
3. Agriculture CoP Co-Chair
4. Part of the group that wrote the first GEO Youth Declaration at the 2023 GEO Ministerial Summit in Cape Town.



Investing in youth is investing in the future of South Africa's EO and space ecosystem.

Why the Youth Forum Matters

“South Africa requires a skilled and inclusive EO and space workforce.”

Ambitions for a thriving African space industry

South Africa aims to play a leading role in fostering space development across the African continent. The National Space Strategy highlights the importance of collaboration with other African nations, particularly in developing shared infrastructure, expertise and technology for space applications. One key initiative is the African Resource and Environmental Management Constellation (ARMC), which involves partnering with African countries to enhance Earth observation capabilities for sustainable resource management. Additionally, South Africa seeks to facilitate technology transfer, capacity building, and training programmes to support emerging space initiatives within the continent. By positioning itself as a regional hub for space science and technology, South Africa contributes to strengthening Africa's collective space capabilities, ensuring that the continent benefits from the advancements in satellite technology, communication and scientific research.

SANSA Website

Who will develop Africa's future EO and SPACE solutions if we don't invest in youth today?

What are we trying to achieve? (Objectives)

1. Leadership and Participation

- Promote youth participation in EO and Space initiatives (Include more SST Disciplines).
- Strengthen youth leadership and governance.

2. Capacity Development

- Encourage training, mentorship, and collaborative learning opportunities.
- Facilitate knowledge exchange across the EO and Space value chain.

3. Collaboration and Networking

- Connect youth with researchers, industry, policymakers, and entrepreneurs.
- Strengthen regional and international collaborations.

4. Open Data and Innovation

- Promote equitable access to EO and space-derived data.
- Encourage youth-driven innovation for societal challenges.

South African Earth Observation
and Space Youth Forum



Priority Areas

Priority Area	Focus
Youth Capacity Development	Skills development and training
Leadership and Governance	Youth representation and participation
Open Data and Earth Intelligence	EO and space data accessibility
Innovation and Entrepreneurship	Youth-led solutions and startups
Collaboration and Networking	National, regional and global partnerships
Outreach and Awareness	Growing youth participation in EO and space



Our Past Activities and Achievements

- Participation at the Science Forum SA (With *Ms Tshisikhawe Mphaphuli*) – *December 2024*
- Participation at the GEO Global Forum Youth session (Italy) - *May 2025*
- Youth Day outreach event (Sebokeng) – *June 2025*



Our Past Activities and Achievements

- Participation at the NEOSS NSC (Pretoria) – *August 2025*
- Participation at the AfriGEO Symposium Youth session – *October 2025*
- AfriGEO Youth CoP Webinar (Profiling youth initiatives) – *September 2025*

AfriGEO Webinar

1

Join us as we hear from some of Africa's young researchers/innovators within the Earth Observation sector



Nelson Mwania



Onesimo Madikizela



Elizabeth Rathupetsne



Lukumon Lateef



Sharon Atuhaire



Nicholas Matingo

Date 16 September 2025
Time 14:00 - 16:00 EAT (UTC +03:00)



Current and planned activities

- *GeoShapers* – A youth capacity-building initiative focused on Earth intelligence, mapping, and spatial analysis across Africa.
 - It operates as part of the AfriGEO GeoPortal project series powered by Esri
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- *Webinar in partnership with AfriGEO Youth CoP and GEO Secretariat Youth leaders.*
 - Mentorship programme organized by the GEO Secretariat Youth leaders.

The poster for the AfriGEO GEOSHAPERS Mission 1: Mapping Urban Heat is a vibrant, multi-colored graphic. At the top, it features the AfriGEO logo, the text 'AFRIGEO YOUTH COP x ESRI', and the Esri logo with the tagline 'THE SCIENCE OF WHERE'. The main title 'GEOSHAPERS' is in large, bold, blue letters. Below it, 'MISSION 1: MAPPING URBAN HEAT' is written in white on a red background, followed by the tagline 'Shaping Africa, One Mission at a Time'. The central image shows a cityscape at night with a heat map overlay, a satellite in orbit, and a map of Africa. Text on the left reads 'HEAT FROM SPACE. SOLUTIONS ON THE GROUND. Using Earth Observation and GIS, we map today's heat to build a cooler, resilient Africa tomorrow.' On the right, it says '100 YOUTH 15+ AFRICAN COUNTRIES' and 'WHO SHOULD APPLY?' with a list: 1. Students, 2. GIS Professionals, 3. Remote Sensing Practitioners, 4. Urban Planners, 5. Environmental Scientists. Below this, it says 'AGES 18-35 ACROSS AFRICA'. The 'THE MISSION JOURNEY' section is a horizontal flowchart with four steps: 'Week one: LEARN & UNDERSTAND' (Urban Heat Islands, Landsat Analysis, Hotspot Mapping), 'Week two: INNOVATE & SOLVE' (Vulnerability Mapping, Green Infrastructure Planning, 30 Urban Analysis), 'Week three: TELL THE STORY' (ArcGIS Story Maps, Data Visualization, Impact, Communication), and 'FINAL SHOWCASE PRESENT TO AFRICA' (ANGED Youth CoP Webinar, Continental Recognition). The 'IMPORTANT DATES' section is a horizontal timeline with five boxes: 'REGISTRATION OPENS' (25 June-06 July 2026), 'ONBOARDING & MENTOR ASSIGNMENT' (06-10 July 2026), 'MISSION PHASE' (Weeks 1-2, 11 July-01 August 2026), 'FINAL SHOWCASE & AWARDS' (17 August 2026), and 'GRAND PRIZE PRESENTATION' (October 2026, AGEO Symposium, Nigeria). The 'TOOLS WE'LL USE' section lists: ArcS Online, AGIS, StoryMaps, Landsat, Earth, Observation, Dashboards, and Web Apps. At the bottom, it says 'APPLICATIONS OPEN!' with social media handles #GeoShapers, #AfrigeoYouth, and #Earthintelligence, and 'EO for People For Planet. For Africa' with the Esri logo. A 'Register Now' button and a QR code are also present, along with the text 'SCAN TO REGISTER' and 'Join African youth using Earth Observation and GIS to build urban heat resilience solutions.' and 'REGISTRATION CLOSES: 06 JULY 2026'.

AfriGEO AFRIGEO YOUTH COP x ESRI esri THE SCIENCE OF WHERE

GEOSHAPERS

MISSION 1: MAPPING URBAN HEAT Shaping Africa, One Mission at a Time

100 YOUTH 15+ AFRICAN COUNTRIES

WHO SHOULD APPLY?

1. Students
2. GIS Professionals
3. Remote Sensing Practitioners
4. Urban Planners
5. Environmental Scientists

AGES 18-35 ACROSS AFRICA

THE MISSION JOURNEY

Week one: LEARN & UNDERSTAND

- Urban Heat Islands
- Landsat Analysis
- Hotspot Mapping

Week two: INNOVATE & SOLVE

- Vulnerability Mapping
- Green Infrastructure Planning
- 30 Urban Analysis

Week three: TELL THE STORY

- ArcGIS Story Maps
- Data Visualization
- Impact
- Communication

FINAL SHOWCASE PRESENT TO AFRICA

- ANGED Youth CoP Webinar
- Continental Recognition

IMPORTANT DATES

REGISTRATION OPENS

25 June-06 July 2026

ONBOARDING & MENTOR ASSIGNMENT

06-10 July 2026

MISSION PHASE

(WEEKS 1-2) 11 July-01 August 2026

FINAL SHOWCASE & AWARDS

17 August 2026

GRAND PRIZE PRESENTATION

October 2026 AGEO Symposium, Nigeria

TOOLS WE'LL USE

- ✓ ArcS Online
- ✓ AGIS
- ✓ StoryMaps
- ✓ Landsat
- ✓ Earth
- ✓ Observation
- ✓ Dashboards
- ✓ Web Apps

Register Now

SCAN TO REGISTER

Join African youth using Earth Observation and GIS to build urban heat resilience solutions.

REGISTRATION CLOSES: 06 JULY 2026

APPLICATIONS OPEN!

#GeoShapers #AfrigeoYouth #Earthintelligence

EO for People For Planet. For Africa

ENKOSI THANK YOU

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