



**Digital Earth**  
AFRICA

# **DE Africa Quarterly Progress Report**

January - March 2024

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# About Digital Earth Africa

## Our vision

Digital Earth Africa (DE Africa) will provide a routine, reliable and operational service, using Earth observations to deliver decision-ready products enabling policy makers, scientists, the private sector and civil society to address social, environmental and economic changes on the continent and develop an ecosystem for innovation across sectors.

## Our mission

DE Africa will process openly accessible and freely available data to produce decision-ready products. Working closely with the AfriGEO community, DE Africa will be responsive to the information needs, challenges and priorities of the African continent. DE Africa will leverage and build on existing capacity to enable the use of Earth observations to address key challenges across the continent.

## About this report

This Quarterly Progress Report provides a snapshot of DE Africa progress made between October and December 2023, as aligned with DE Africa's 2023 Annual Work Plan.



**Open and Free Data**

- Interoperability
- Privacy and Integrity



**Operational Service**

- Continental-scale
- Sustainable
- Domain expertise



**Accountability and transparency**

- Responsive to African priorities
- Agile, nimble and actions oriented



**Diversity and inclusion**

- Multi-sector perspectives
- Span data communities
- Foster collaboration

*The governance of DE Africa is guided by several key principles*

# Program Goals



## Livelihood strengthening

EO data will support more informed decision making at government, sectoral and other levels, contributing to direct and indirect benefits for individuals and communities.



## Economic development and job creation

Through access to data for commercial products and services development, DE Africa will support new business development and employment opportunities.



## Digital transformation is advanced

Through industry uptake and innovations, DE Africa will help to fuel the ongoing evolution of the digital economy in Africa.



## Development activities are more effective

Support enhanced understanding of development challenges and solutions, and in so doing, strengthen collective impact and ability to assess progress towards national priorities, African Union's Agenda 2063 and the UN SDGs



# Phase III | Strategic Priorities



## Enhance Country Engagement

We and our Implementing Partners will embed DE Africa products and services to **enhance and scale regional activities across Africa**.

Our team will create a roadmap for country engagements that will ensure consistent support for countries.



## Ensure our Sustainability

We are committed to delivering on funding partners' strategic goals and strengthening Technical Advisory Committee and Governing Board roles to **ensure sustainable governance**. We will operate efficiently, diversify income sources and **deepen key partnerships** for long-term sustainability.



## Enable Climate Action

We will empower climate action by **developing in-country knowledge and skills**. We will ensure decision-ready products are well placed to enable policymakers, scientists, the private sector and civil society to better address climate adaptation, mitigation and reporting.



## Engage the Community

We will address user needs, provide excellent support, increase platform use, continue to capture user impact, and increase visibility of platform champions.

We will serve an **audience that meets our diversity and inclusion strategy** and explore bridging science and community action.

# 2024 Strategic Priorities

Phase III of DE Africa will drive major benefits from the infrastructure and surrounding governance and institutions established during Phase II, with a focus on increased user uptake, expanding in-country impacts, and ensuring long-term sustainability. In order to address these, and aligned with the Program outcomes, priorities in 2024 include:

- **Enhancing country engagement:** this next phase of Digital Earth Africa is fundamentally different in that it will involve working directly with countries to apply the continental infrastructure to support national priorities. This will be achieved by undertaking country-specific activities, including capacity development, co-design and development of workflows, services and data products that responsively address priorities specific to diverse country and cross-sector user needs. In order to have impact at a government level, we will engage directly with national governments through our Implementing Partners and members of our governance structures, as well as other program partners and aligned programs, to understand each country's government context, the key problems to be addressed, the information gaps that DE Africa can fill, the capacity building requirements, and the modalities to work in a particular country.
- **Ensuring our sustainability:** the programme will continue to maintain its good governance by strengthening the roles of the Governing Board and the Technical Advisory Committee. Both Governance Structures' 3-year tenure concludes in July 2024, leading to the recruitment and rotation process being initiated. In 2024 the programme strategies will be reviewed and merged into one document as part of the first steps to developing a 5-10 year strategy which will be undertaken in year 3 of Phase III. All relevant operational frameworks will also be updated and aligned to ISO standards for 'Good Corporate Governance'. In doing so, DE Africa will continue to strengthen its firm foundation for effective decision-making and long-term success, ensuring that governance, inclusion and transparency continue to be central to the program.
- **Enabling climate action:** Africa is on the frontline of the climate crisis with populations across the continent severely affected by drought, flood and rising sea levels. Given the unique role DE Africa has to play in supporting country-led action on climate change mitigation, and climate adaptation, we will continue with our overarching focus on climate action throughout 2024. This will be achieved by developing new tools and services to support planning and decision making, while engaging with in-country users to promote uptake and usage of DE Africa continental services and associated analysis tools, with a focus on supporting climate change related impact assessments and National Adaptation Planning initiatives.
- **Engaging the community:** working to drive impact through wider uptake of DE Africa's platform and services by aligning DE Africa services with country-level use cases, expanding outreach and engagement, and positioning DE Africa capabilities to address specific requirements and national priorities. Country-level capacity building and institutional strengthening activities will also promote further uptake and usage of both existing and new DE Africa products and services to derive greater impact. DE Africa will work to understand its users, and their needs and provide superior support that increases use of the platform. In 2024 we will continue to capture the impact our users have, putting in place mechanisms to capture this information in a more regular and robust manner. The Monitoring, Evaluation and Learning (MEL) Framework will be supported by the development of a MEL Plan that will outline the MEL System (data collection, analysis and reporting processes) to track, assess and improve impact over the program life-cycle. We will also continue to ensure that we serve an audience that meets our diversity and inclusion strategy.

# 2024 Outcomes and Activities

## Sustainment

1. 2024-2025 Annual workplan and aligned budget endorsed by the Governing Board
2. The Data and Services Roadmap, a central document in the governance of DE Africa was completed and endorsed by the TAC
3. Waterbodies Continental Service - development and production phase was completed and a beta version of the service was released to the public in June

## Uptake and impact

1. In-country engagements with identified opportunity countries have been successful with new entry points at government level being unlocked. Engagements were in South Africa, Kenya and Ghana.

# January - March 2024 Highlights



## Enhance Country Engagement

Phase III country engagement approach developed to inform program planning and ensure Phase III outcomes are met.



## Ensure our Sustainability

Delivered the EO Capacity Madagascar project, funded by the Australian Government's Direct Aid Program. Aimed at supporting sustainable development through geospatial training in Madagascar, demonstrating how a diverse range of government, research and industry partners can use DE Africa data.



## Enable Climate Action

Continued development of the Climate Action Tool Kit, including prototyping of a national wetlands workflow, and the Waterbodies Monitoring Continental service.



## Engage the Community

Showcased DE Africa Coastlines Monitoring Service at the 5th Ocean Innovation Africa Summit in Cape Town in March, continued our weekly live sessions including an International Women's Day roundtable.



# Governance and Program Operations

The contract between Geoscience Australia and the South African National Space Agency (SANSA) expired on the 31 March 2024.

To ensure continued program operations in Africa, an interim hosting arrangement was secured with The Research Institute for Innovation and Sustainability (RIIS) ensuring that crucial African-based team members were retained and could continue program operations.

The programme transition will begin in the next quarter.

Work has continued with annual planning workshops for 2024. DE Africa's in-country approach for Phase III was developed to facilitate the focus of the annual planning. This framed a detailed discussions for the plan, ensuring the Phase III outcomes of enhancing in country engagement, ensuring sustainability, enabling climate action and engaging with the community are at the forefront of delivery.



# Diversity and Inclusion

This quarter we celebrated International Women's Day with a social media series celebrating colleagues and users, alongside a special Live Session roundtable where Dr Naa Dedei Tagoe, Pauline Okeyo, Sinethemba Mtshali and Dr Jokotola Omidiji shared their experiences of their careers in Science. A recording of the roundtable is available here: [Live Session 167 | In celebration of International Women's Day | Digital Earth Africa](#)

International Women's day also coincided with DE Africa's global science team meeting in Canberra, Australia, where we celebrated our women in STEM contributing to insights that support sustainable development.

DE Africa also sponsored our long-time collaborator, Dr Jokotola Omidiji, to visit Australia and participate in some of the Science planning and discussions, alongside spending some time at the Australian National University, presenting her work using DE Africa to map areas of flood risk in Lagos, Nigeria.

In March, DE Africa's Capacity Development Lead Dr Kenneth Mubea, attended the First YouthMappers Summit Kenya as a guest speaker. With 130 attendees from five different universities in attendance, the opportunity provided students an opportunity to interact, fostering meaningful networks and encouraging future collaborations. This year's theme, Open Data for Advancing Sustainable Development Goals, allowed participants to explore the potential of DE Africa, alongside other tools, and its application to addressing local challenges. A blog by youthMappers Regional Ambassador Maurine Oyugi is available here: [YouthMappers Kenya Summit 2024: Fostering Collaboration and Career Growth in Kenya](#)



Above: The women of DE Africa and DE Australia's science teams.  
Below: YouthMappers Summit Kenya Participants





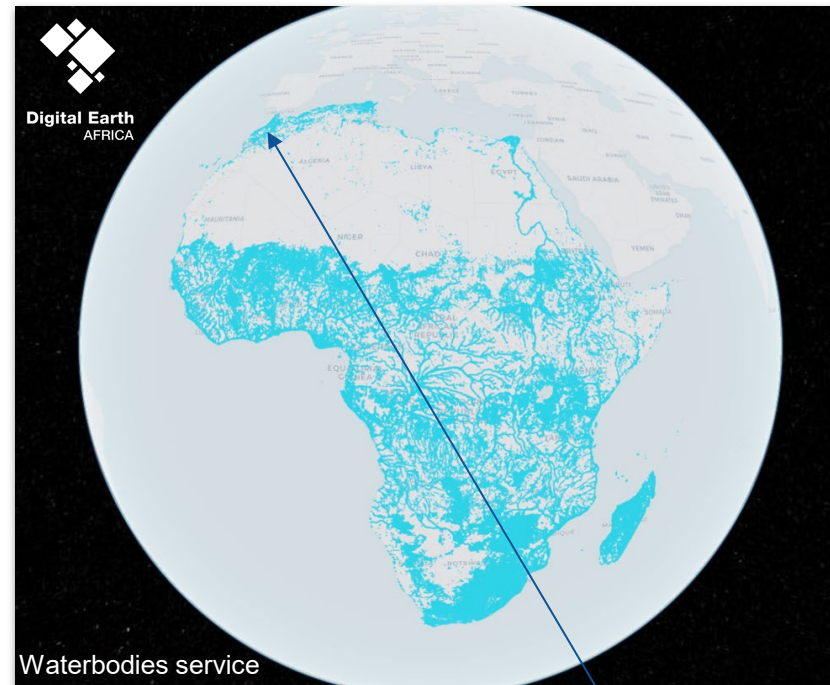
# Science

Development of the Climate Action Toolkit continued, with the creation of a wetland workflow. The workflow was presented to the South African National Biodiversity Institute (SANBI) who provided feedback on the tool. The workflow development continues with implementation by our partners RCMRD in Kenya, and CSE in Senegal.

Likewise, our provisional waterbodies service has been further developed, with the release of a new database containing an initial five years (2019-2023) of time series made available through DE Africa maps with new charts.

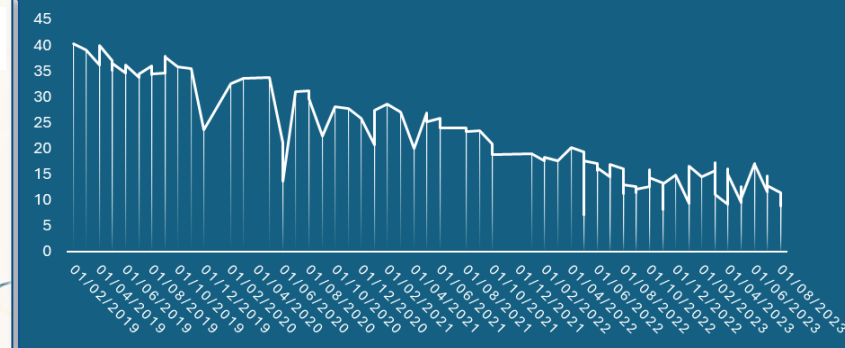
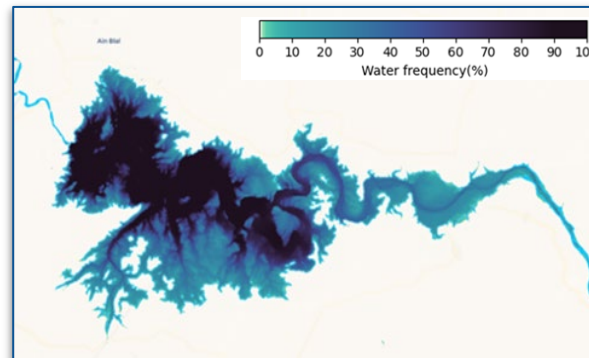
Alongside this work, eight datasets and notebooks were updated, and the 2022 annual mosaic ALOS PALSAR was added to our data catalogue.

The science team also spent time providing support in the development of 5 new use cases, including water quality assessments of Lake Victoria in Kenya and the Katse Dam in Lesotho, irrigation mapping in Limpopo in South Africa, flood risk assessment in Nigeria, and Coastal erosion at heritage sites in Kenya and Senegal.



Barrage Al Massira, a site of biological and ecological importance and the second biggest reservoir in Morocco, is located on the Oum Er-Rbia River. In addition to providing drinking water to the town of Casablanca, Al Massira is also one of the most important fishing sites in the country, provides water for agriculture, and supports hydropower production.

DE Africa Waterbodies service shows that water levels in the reservoir have been steadily declining over the past few years, with the surface area 91% below the 30 year maximum by October last year.



# Science engagement

DE Africa was honoured to be part of NASA's Pale Blue Dot: Visualization Challenge. The challenge aims to bring together innovators across disciplines and countries to find creative solutions to the urgent challenges facing the world today, like climate change, water insecurity and food insecurity. DE Africa participated in a judging panel reviewing submissions of visualizations using Earth observation data to advance one or more of the Sustainable Development Goals (SDGs); Zero Hunger, Clean Water and Sanitation or Climate Action.

DE Africa also had the opportunity to showcase our Coastlines product as sponsors of Ocean Innovation Africa. The annual summit convenes innovators, entrepreneurs, researchers, investors, industry-leaders, and policy-makers from Africa and abroad leading the way in development and adoption of sustainable ocean solutions and promote growth of an equitable and sustainable ocean economy in Africa. DE Africa's Lead Scientist, Dr Lisa Rebelo, hosted a workshop on our coastlines product for various industry partners.

DE Africa was also invited to present at the Food and Agriculture Organisation - SilvaCarbon Central African Regional Workshop in Libreville, Gabon. Kenneth Mubea (Capacity Development Lead), presented on DE Africa use cases that addressed forest cover and mangrove monitoring.

DE Africa welcomed the global science team back to Canberra, Australia for the annual Science team planning workshop. This in-person meeting allows science team members from across Africa and the world spend a week dedicated to work planning for the remainder of the year and ensuring we are meeting our outcomes. This trip also allowed for engagement with Digital Earth Australia to share knowledge and identify areas of collaboration. Science team members also took time out from their busy meeting schedule to visit the Australian National University and present their work.

**Digital Earth Africa** – January - March 2024



*DE Africa and DE Australia Science teams*

# Platform

This quarter included a significant remediation of the platform to ensure optimal functionality.

This included:

- Handover of the platform from SANSA
- Regular maintenance patching, EKS cluster upgrade and Explorer/OWS releases.
- AWS account cost remediation.
- Landsat pipeline fixes and backfill
- Coastline data update
- Ongoing Sandbox user support
- Coordinating Sentinel-2 collection upgrade

This successful remediation has already reduced the ongoing cost of operating the platform, as well as streamlined platform processes.

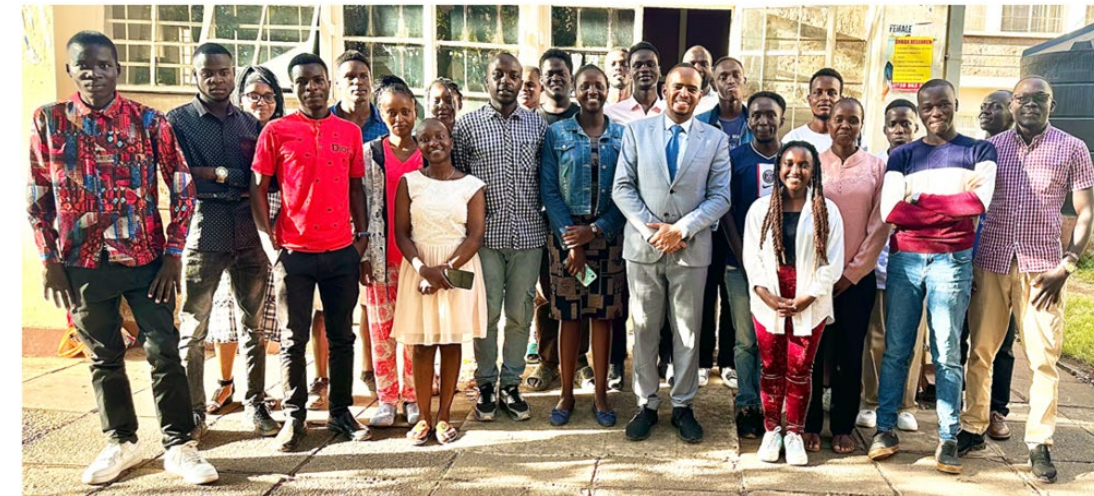


# Capacity Development

This quarter saw our busy Capacity Development team undertake engagements with a range of stakeholders, alongside our ever popular weekly Live Sessions.

These included:

- Presenting to staff, students and affiliates from the centre of Excellence in Biodiversity, Conservation and Natural Resources Management at the University of Rwanda. A face to face workshop will take place later this year due to the level of interest.
- Giving an introduction to the DE Africa platform at the Institut d'Enseignement Supérieur de Ruhengeri (INES-Ruhengeri) an Institute of Applied Sciences in Rwanda.
- Partnering with the RCMRD Regional Geo Explorer Association to provide training on using the DE Africa platform to students completing a diploma of Geographic Information Systems.
- Presented to undergraduate students of Earth observation and environmental planning at Kenyatta University and Jomo Kenyatta University of Agriculture and Technology.
- Collaborated with our Implementing Partner, CSE, presenting to students of Masters in Geomatics and Université Sine Saloum in Senegal, with potential collaborations with the university in the future.



*Kenyatta University GIS club with DE Africa Capacity Development Lead, Dr Ken Mubea*

# EO Capacity Madagascar Project

DE Africa has partnered with the Australian Government's Direct Aid Program via the Australian Embassy in Mauritius, with support from our funding partners, The Helmsley Charitable Trust, to deliver the EO Capacity Madagascar Project. This initiative aimed to empower sustainable development through geospatial training in Madagascar, demonstrating how a diverse range of government, research and industry partners can harness freely available Earth Observation data to cost-effectively build more environmentally sustainable resources sector and support agriculture and water resource management, particularly leveraging Australian science and innovation through the DE Africa platform. Partnering with Key stakeholders including the ministry of Mines and Natural Resources, the Ministry of Agriculture and the University of Antananarivo, the project enhanced data literacy, resource management and agricultural practices in Madagascar.

The training was officially launched by Madagascar's Minister of Environment and sustainable Development, His Excellence Max Fontaine, alongside the Deputy Head of Mission of the Australian Embassy in Mauritius, Ms Katie Lalor.

Key feedback from participants highlighted that the platforms are user friendly, that there is no need to be a python programmer to use the platform, that there is a large amount of processed freely accessible datasets available through the platform and the online training resources and regular support compliment the face to face training.



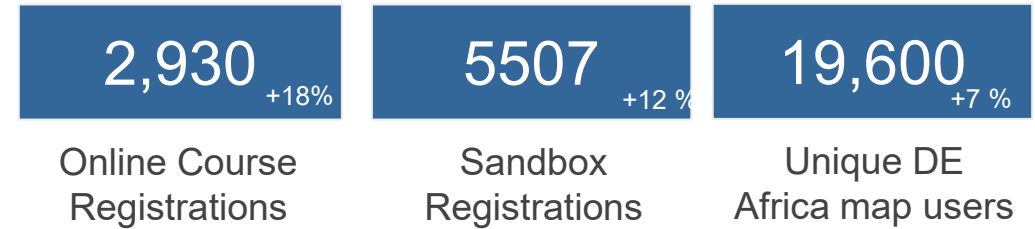
*Left to right: Dr Solofo Rakotondraompiana, University of Antananarivo, Ms Katie Lalor, Deputy Head of Mission at the Australian Embassy in Mauritius, His Excellence Max Fontaine, Madagascar's Minister of Environment and Sustainable Development, Mr Joseph Tuyishimire, DE Africa's User Engagement Manager.*



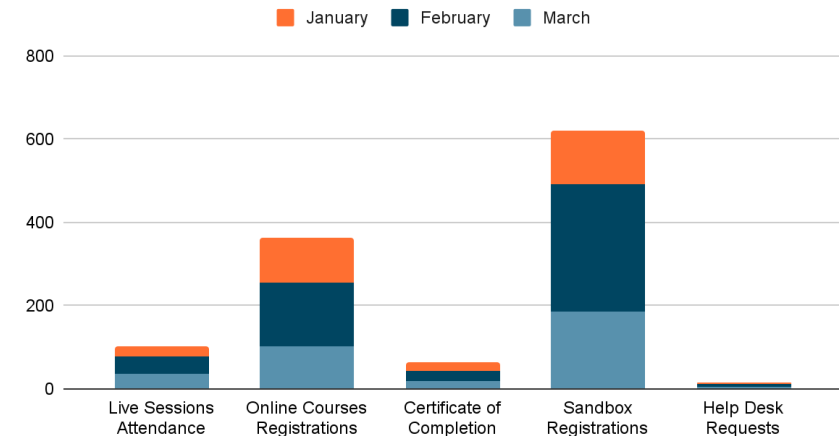
# Growing user community

- Attended the GEO Blue Planet workshop for Ocean Observation and Prediction for Coastal Sustainability in Africa, in Nairobi Kenya.
- Presented at a session at Biodiversity and Protected Areas Management (BIOPAMA) workshop, Nairobi Kenya.
- Attended the Africa forum on Sandboxes for data, presenting a session on Innovative Solutions for a Sustainable Future in Africa.
- Presented at Global Monitoring for Environment and Security (GMES) and Africa Continental Service Workshop on Water and Natural Resources in Nairobi, on how DE Africa is translating Earth observations into insights that support sustainable development.
- Follow up meeting, organised by Implementing Partner CSE, debriefing with West Africa Coastal Area (WACA) country representatives on DE Africa's coastline tool.
- Attended the Workshop of Data Innovations in Agriculture held by the Kenya Space Agency.
- Participated in the Workshop in Data Innovations in Urban Management, and the Workshop of Data Innovations in Agriculture, hosted by the Kenya Space Agency, bringing together key stakeholders demonstrate the value of geospatial data and the DE Africa platform for informing policy and decision making.
- Engaging with Confluence, a startup based in Dublin Ireland, who have a project planned in Abuja, Nigeria, mapping areas of flood risk.

## All time User Community



2024 Monthly User Engagement Breakdown



# Communications Impact

Social media followers have increased across the board. Key metrics:

- LinkedIn - this is our best performing social media platform with 7,096 followers, a growth of 715 followers over the three months. We achieved a 6.06% engagement rate on our page with a 5.57% engagement rate on posts, including 26 shares.
- X (formerly Twitter) - saw a more moderate growth to 7,116 followers and a lower engagement rate on post at 3.84%.

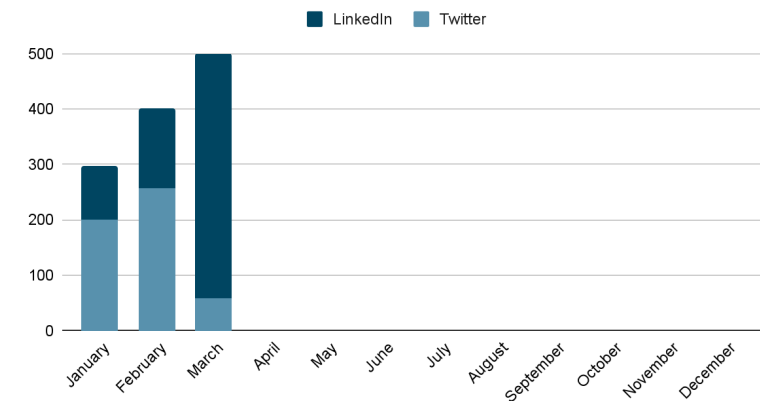
DE Africa received positive coverage in the media and partner blogs:

- Daily Maverick, South Africa  
[Empowering entrepreneurs will critically boost Africa's space innovation ecosystem.](#)
- Business Day, Nigeria  
[Australia is open to Nigerian students to study, work - Envoy - Businessday NG](#)

## Communications Metrics



New Followers on Communications Platforms



## Top 5 Visitor locations (number of users)

United States - 1,306, Kenya - 1,071,  
South Africa - 626, Australia - 359  
United Kingdom - 335

# Acknowledgements







**Digital Earth**  
**AFRICA**

## Connect with us

- Website: <https://www.digitalearthafrika.org>
- Maps: <https://maps.digitalearth.africa>
- Learning Platform: <https://learn.digitalearthafrika.org>
- User guide: <https://docs.digitalearthafrika.org>

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