



Digital Earth
AFRICA

DE Africa Quarterly Program Report

Quarter 1

April - June 2024

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About Digital Earth Africa



Our vision

Digital Earth Africa (DE Africa) provides reliable Earth observation services, to deliver decision-ready products, helping policy makers, scientists tackle social, environmental, and economic changes while fostering innovation across sectors.

Our mission

DE Africa openly accessible data to produce decision-ready products, collaborating with the AfriGEO community to address Africa's priorities and challenges, while strengthening existing capacity to apply Earth Observations effectively.



Livelihood strengthening

Enhance informed decision-making at government, sectoral, and other levels, providing direct and indirect benefits to individuals and communities by using EO data



Digital transformation is advanced

Drive the evolution of Africa's digital economy by promoting industry uptake and fostering innovations.



Economic development and job creation

Facilitate new business development and employment opportunities by providing access to data for commercial products and services.



Development activities are more effective

Enhance understanding of development challenges and solutions to strengthen collective impact and assess progress toward national priorities, the African Union's Agenda 2063, and the UN SDGs.



Enhance and scale regional activities across Africa.



Empower climate action by developing in-country knowledge and skills.



Serve an audience that meets our diversity and inclusion strategy.



Ensure sustainable governance and deepen key partnerships.



Program Outcomes

OUTCOME 1: Sustainment

DE Africa's successful transition to the Interim Host (RIIS), along with the endorsement of the 2024-2025 workplan and budget, and the approval of the Data and Services Roadmap by the TAC, ensures sustainment of DE Africa operationally, financially and technically.

Strengthening Governance & Program delivery

Successful **IAB** and **TAC** meetings, coupled with comprehensive onboarding, ensured alignment with strategic goals,

Enabling Partnerships

African governments and regional institutions support DE Africa's shift toward financial sustainability, recognizing its value and operational impact

Sustainment and Business Model Development

Developing a cross-sector business model to diversify revenue, sustain operations, and secure funding beyond Phase III

Science and Technology

DE Africa's science and technical platform remains a robust, world-leading capability, responsive to Africa's needs

OUTCOME 2: Uptake and Impact

DE Africa's engagements in Southern and East Africa have facilitated government and stakeholder collaboration, enhancing program capacity and driving social, economic, and environmental impact.

User needs/in-country engagement

Customizing DE Africa services for in-country needs like food security, connecting with end-users via partners and communities

Capacity Development

Development of tailored training materials to support diverse users, from decision-makers to in-country specialists, in utilizing DE Africa's products

User Engagement/Uptake

Rapid growth in uptake of DE Africa services including the Map and the Sandbox, and direct use of DE Africa services

Demonstrating impact

DE Africa services empower community decision-making, improve lives, and support African governments in using data for policy and action

Cross-Cutting

Diversity and Inclusion

Communications and PR

Monitoring, Evaluation and Learning

Benefits Realisation

Risk Management



Outcome 1 – Sustainment

During Quarter 1 (April–June 2024), Digital Earth Africa (DE Africa) made significant strides in sustaining its operations and expanding its impact across the continent. Governance structures were strengthened through the successful transition to interim hosting by RIIS, the endorsement of the 2024–2025 Annual Workplan and Budget, and important updates to the Governing Board and Technical Advisory Committee frameworks.

Key technical achievements included the launch of the Waterbodies Monitoring Service, expansion of Planet NICFI basemaps integration, development of new user resources, and critical upgrades to cloud infrastructure and data pipelines. Despite rolling over some activities into Q2 mainly due to staffing transitions and external dependencies mitigation strategies were implemented to maintain momentum.

Outcome 2 – Uptake and Impact

Engagements in South Africa, Kenya, and Ghana advanced, opening new government-level entry points and expanding regional collaboration. Capacity building included virtual training for Tunisia and three face-to-face workshops in South Africa covering marine and coastal areas, communities of practice, and water management. DE Africa's presence grew through participation in regional conferences like the Esri Eastern Africa Conference and virtual sessions with key partners such as Geo SK Kenya, UNEP GRID, and the Westerwelle Foundation, highlighting private sector and startup support.

Two new online courses focused on coastline and waterbodies monitoring services were developed. Communications efforts revived the programme's digital presence with an active social media campaign and a successful launch of the Waterbodies Monitoring Service, supported by consistent live sessions and audience engagement to drive awareness and uptake.



Highlights for the Quarter



Key Updates



OUTCOME 1: Sustainment

DE Africa is on-track to be sustained in Africa (technically, operationally and financially), with key African stakeholders invested to achieve this end-point



Strengthening Governance

- On 1 April 2024, the Research Institute for Innovation and Sustainability (RIIS) was successfully appointed as the interim host of the DE Africa Program Management Office (PMO) for a 12-month period. The transition was effectively managed through staff onboarding by mid-April, finalisation of internal governance processes, and a Global Team and Implementing Partner Workshop held in South Africa from 13–17 May.
- The 10th Governing Board Meeting (GB10) took place on 12 June. Key papers were endorsed out-of-session including the 2023 Annual Report, the 2024–2025 Annual Workplan, updated Risk Registers, and approval to initiate the Board member renewal process ahead of the July term expirations.
- The 19th Technical Advisory Committee (TAC) meeting was held on 26 June, where the Data and Services Roadmap was endorsed, along with the plan to rotate members whose terms had expired.
- Operational structures for the remainder of 2024 were also formalised, including weekly management and finance meetings, monthly strategic and operational review sessions, quarterly progress reviews, and dedicated governance preparation meetings.
- In June, it was also agreed that initial development of the Benefits Realisation Framework would commence with Synergy. Progress was also made in reviewing and updating the Monitoring, Evaluation, and Learning (MEL) Framework, with changes expected to be finalised and submitted to Geoscience Australia by the end of July.



Strengthening Governance

- In June, DE Africa began planning the next **Diversity and Inclusion (D&I)** Community Working Group meeting, scheduled for July. Updated statistics show strong representation across governance and implementation structures: 43% of Governing Board members are women and 86% are African; 18% of TAC members are women, with 61% African from 12 countries; and 26% of Implementing Partner members are women, with high linguistic diversity (French, Swahili, Arabic). Within the DE Africa team, 67% of staff are women and 80% are African.

D&I was also advanced through targeted training initiatives. Highlights include inclusive training at Machakos School for the Blind in Kenya, gender-balanced technical training for South Africa's Department of Water and Sanitation, and a workshop at CSIR in Pretoria attended by 80 stakeholders from government, academia, and civil society, with 40% women participants. These activities underscore DE Africa's commitment to inclusion in both representation and capacity development.



Enabling Partnerships

While most deliverables under Outcome 1.2 are scheduled for Quarter 2, foundational work began in Q1. An internal Partnerships Meeting was held to align team understanding, and recurring monthly meetings have been established to track progress.

Esri

- A first technical partnership meeting with Esri was held on 12th June 2024.
- Recurring monthly meetings are scheduled to advance joint initiatives outlined in the Esri workplan.

AWS

- Continuous engagement with AWS is key to optimizing our cloud infrastructure and cost efficiency.
- Although the AWS account quarterly technical meeting was delayed to Q2, AWS remains a pivotal partner for our operational enhancements.



Implementing Partner Activities



African Regional Institute for Geospatial Information Science and Technology (AFRIGIST)

- Met 20 June to review alignment with DE Africa strategic priorities.
- Agreed to submit an updated work plan incorporating feedback and timeline adjustments.



Agriculture, Hydrology, Meteorology Regional Centre (AGRHYMET)

- Convened 20 June to clarify programme alignment.
- Committed to provide a concise one-pager detailing how their activities support DE Africa's 2024 priorities.



Centre de Suivi Ecologique (CSE)

- Reviewed existing work plan on 24 June; only minor updates and timeline refinements remain.
- Fully aligned work plan to be finalized with updated milestones and submitted for sign-off.



The Sahara and Sahel Observatory (OSS)

- Held a planning session on 21 June to integrate OSS deliverables into DE Africa's Annual Workplan.
- Preparing revised work plan for presentation and discussion on 1 July.



Regional Centre For Mapping Of Resources For Development (RCMRD)

- Submitted an updated work plan on 4 July, including realigned timelines and deliverables.
- Engaged on sponsorship opportunities for RIC 2024 to enhance regional impact.



Science and Technology

Key scientific achievements in Q1 included the completion and endorsement of the **Data and Services Roadmap** by the Technical Advisory Committee (TAC-19). This roadmap outlines current and potential datasets and thematic services to be delivered by DE Africa, providing a strategic foundation for scientific development. A major milestone was the launch of the Waterbodies Monitoring Service in June, which tracks over 700,000 water bodies across Africa using 40 years of satellite data. Updated weekly, it provides accessible and decision-ready insights on water availability and surface changes—setting a global benchmark for operational surface water datasets.

Additional progress included ongoing co-development with SANBI on a wetland inventory, testing of the USGS Aquatic Reflectance product, and the release of new datasets such as Planet NICFI basemaps and near real-time burned area data. Technical support and use case development spanned multiple countries and applications—ranging from crop classification and irrigation mapping to coastal erosion monitoring and habitat mapping. International science engagement continued with organisations like GEOGLAM, World Cereal, and USGS to explore collaboration and integration of DE Africa products into global forecasting systems like FEWSNET.

Workflows

- Continued co-development process with SANBI to develop SA wetland inventory
- Continued development of terrain indices for wetland workflow

Dataset and notebooks

- Testing of USGS Aquatic reflectance product for estuaries and waterbodies; discussion with USGS of observed behaviour
- Planet (NICFI) monthly basemaps made available through maps and sandbox; dataset notebook preparation
- Near real time burned area notebook prepared and released



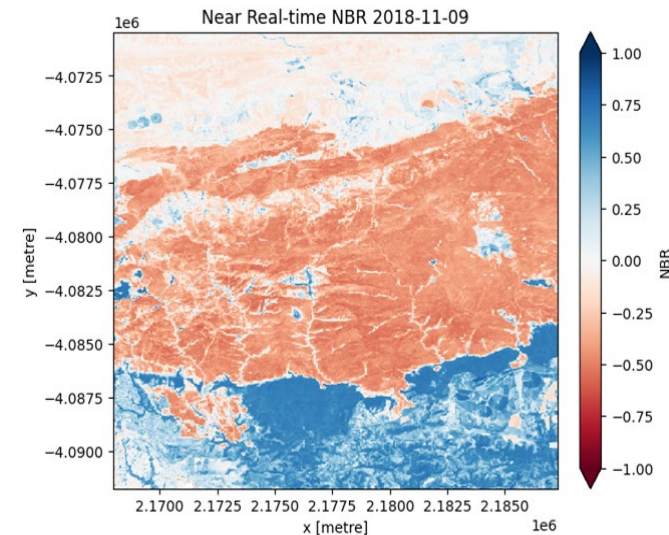
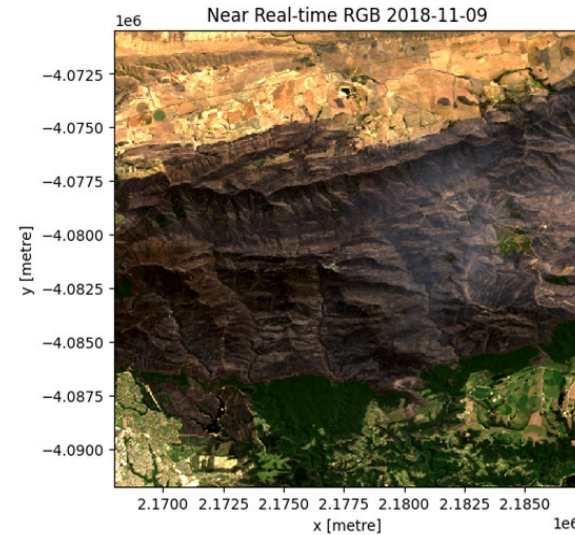
Science and Technology

Use Case Development and Technical Support;

- Habitat mapping for conservation, mapping poplar species (South Africa)
- Coastal erosion at heritage sites, East and West Africa (Kenya, Senegal)
- Adaptation of crop type mapping for Busia County maize crop classification (Kenya)
- Irrigation mapping and digital twin (Limpopo; South Africa, Zimbabwe, Mozambique)
- Chlorophyll-a and turbidity time series analysis, Burkina Faso
- SWAC green space proximity indicators approach migrated from GEE (continental)
- Web map applications for monitoring of farms (Ghana).

International Science Engagement:

- Discussions were held with GEOGLAM and World Cereal to provide an update on DE Africa and identify status of World Cereal outputs;
- Discussions continued with the USGS regarding Digital Earth Africa's products and services and the potential use and integration into short-term forecasting initiatives with a view of incorporation into FEWSNET;
- Discussions continued with the USGS regarding testing of the Aquatic Reflectance product.



Mapping an burnt area following a fire event in South Africa, using the DE Africa near real time burnt area notebook



Platform operations were maintained with several software updates completed successfully. The platform team also provided detailed support for the development of the Waterbodies service. Work towards updating key Sentinel and Landsat pipelines to ensure those datasets and their derivatives are current and operational is ongoing. Separately, work was undertaken towards processing and hosting the new, reprocessed Sentinel-2 collection (collection 1) data.

Several advancements were made towards enhanced security practices, computational efficiency, and cost efficiency.

- **Platform upgrades and performance**
 - EKS Upgrade to 1.27 completed before end of support for 1.26.
 - Planning for the 1.28 upgrade has started.
 - Improved cost monitoring, cost alerting and efficiency
 - Cost savings with recurring unused storage cleanup
 - AWS security review actions implemented
 - Increased security with MFA and password policy enforcement
 - Waterbodies back-processing and API deployment
 - Deafrica-tools development and updating
- **Data pipelines**
 - Testing upgrades for new Sentinel-2 collection 1
 - Gap filling Sentinel and Landsat pipelines
 - Global Mangrove Watch (GMW) dataset updating



Science and Technology

- **DevOps support**
 - Support for Waterbodies processing.
- **DE Africa Explorer**
 - We have seen several abnormal restarts on the Explorer service. This is also the case for the DE Australia instance. The GA team is investigating.
 - Explorer on Development was upgraded to the latest release.
- **JupyterHub Upgrade on Production**
 - Upgrade of JupyterHub release version from 3.0.0 to 4.1.5 completed
- **Landsat 9 Data Support**
 - A new Landsat orphan report was created to investigate data discrepancies.
- **Global Mangrove Watch Data Update**
 - The GMW script was updated to download the data from a new data source (Zenodo) and index the data (individual tiles) into the development ODC with the existing product (historical tiff).
- **Sandbox Support**
 - Ongoing Sandbox user support.



OUTCOME 2: Uptake and Impact

DE Africa is consistently used by key stakeholders - governments, communities, private sector and individuals, to drive environmental, social and economic impacts



In-Country Engagement

Kenya

- **Esri Eastern Africa Conference (15–17 May):** DE Africa presented on its Esri collaboration and Africa Geoportal. Outcomes included new connections with participants from Kenya, Tanzania, Rwanda, Uganda, and Burundi, and follow-up engagements with Esri communities in these countries.
- **Geospatial Technologies for SDGs Webinar (5 June):** DE Africa presented on its role in SDG reporting.
- **Kenya Space Expo (18–20 June):** DE Africa showcased its work under the theme “Bridging the Capacity Gap in Earth Observation,” engaging with government, academia, and NGOs.

Tunisia

- **UNSD ‘Data for Now’ Initiative (from 27 May):** DE Africa engaged with the National Statistics Institute to support SDG reporting. Tunisia requested DE Africa support for monitoring: Erosion and artificialisation, Sea level rise, Urban air quality (PM2.5/PM10), Water-related ecosystems. **Next Steps:** Virtual training sessions in July on coastline, water, and crop monitoring for relevant government departments.



In-Country Engagement

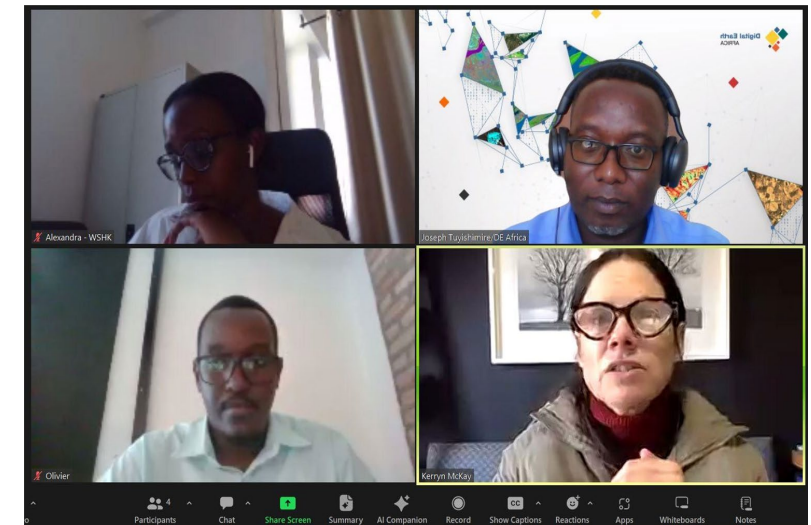
South Africa

- **Communities of Practice Workshop (6 June, CSIR Pretoria):** DE Africa presented its services and discussed strengthening the South African geo-ecosystem. Follow-up engagements planned with universities (UJ, Wits, Fort Hare).
- **Department of Agriculture, Western Cape (27 June):** Interest expressed in DE Africa crop mapping and waterbody services for monitoring agriculture.
- **SCS Space (27 June, Stellenbosch):** Discussions on applying DE Africa services to support local municipalities through Earth observation tools.



Rwanda

- **Westerwelle Startup House:** DE Africa explored integration of its platforms into the Foundation's new geospatial department. Plans include participation in the **Africa EO Challenge** and co-hosting an **agriculture masterclass** targeting startups working in agriculture and geospatial innovation.



Capacity Development & User Engagement

Tunisia

- **UNSD Virtual Awareness Session** — 27 May 2024
SDG reporting training, ~25 participants (virtual)

South Africa

- **Marine & Coastal Areas Workshop (AUC)** — 22–24 May 2024
Coastal erosion monitoring presentation, number not specified
- **Communities of Practice Workshop (CSIR)** — 4 June 2024
DE Africa platform training, ~100 participants (40% women)
- **Dept. of Water & Sanitation Training** — 25–26 June 2024
Water resource monitoring training, 17 participants (12 women, 5 men)
- **Dept. of Rural Development & NGI Briefing** — Late June 2024
Overview session, ~30 participants

Kenya

- **Machakos School for the Blind Training** — 21 June 2024
Inclusive geospatial training, 20 students (7 visually impaired)



Capacity Development & User Engagement

User Growth:

- Sandbox registrations: 545 (on track for annual target of 6,000)
- Online course registrations: 270 with 84 certifications
- DE Africa live sessions: 67 participants (20 women, 47 men)

Key Virtual Engagements:

- Geo SK Organisation (Kenya) – 17 April
- UNEP GRID (Geneva) – 30 April
- Development Gateway (West Africa) – 1 May (Green Wall Initiative collaboration)
- Westerwelle Foundation (Kigali) – 7 May (startups support)
- MGC Consulting (Niger) – private sector engagement

Conferences & Workshops:

- UN/Costa Rica PSIPW Conference (7–10 May): Presentations by DE Africa champions from Zimbabwe
- Ghana University College of Water, Science and Engineering (15 May): Awareness session on DE Africa in academia
- African Space Leadership Institute (22–23 May): DE Africa presentation
- Senegal (29 May): Coastal risk indicators workshop participation

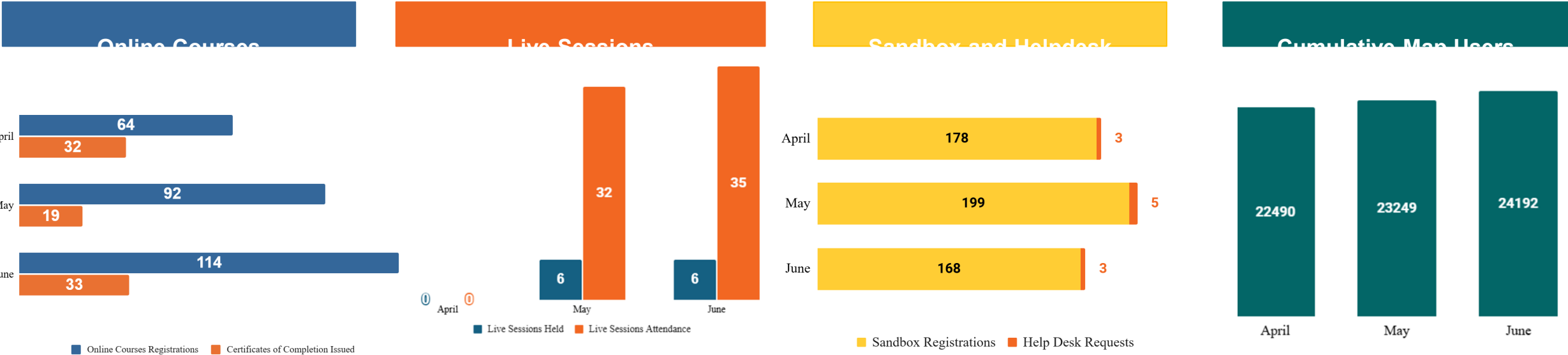
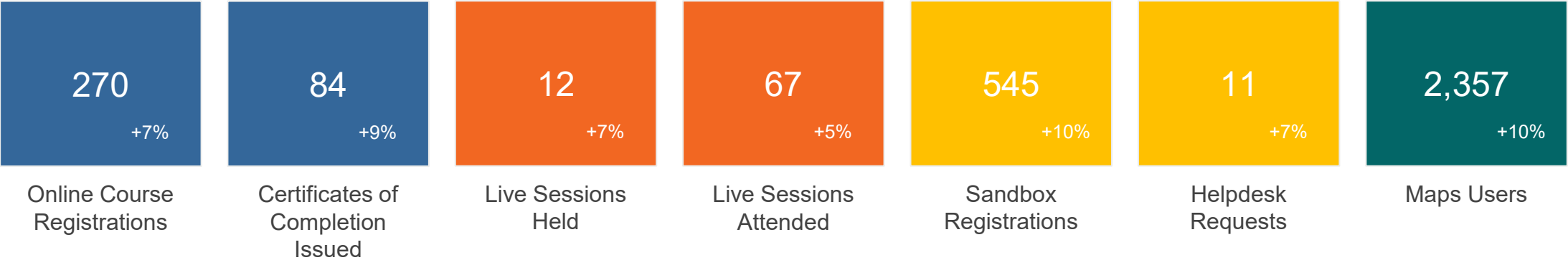
Face-to-face Engagements:

- University of Rwanda: Awareness and training to improve curriculum
- Department of Agriculture, Pretoria (13 May): Collaboration on crop productivity and rangeland management



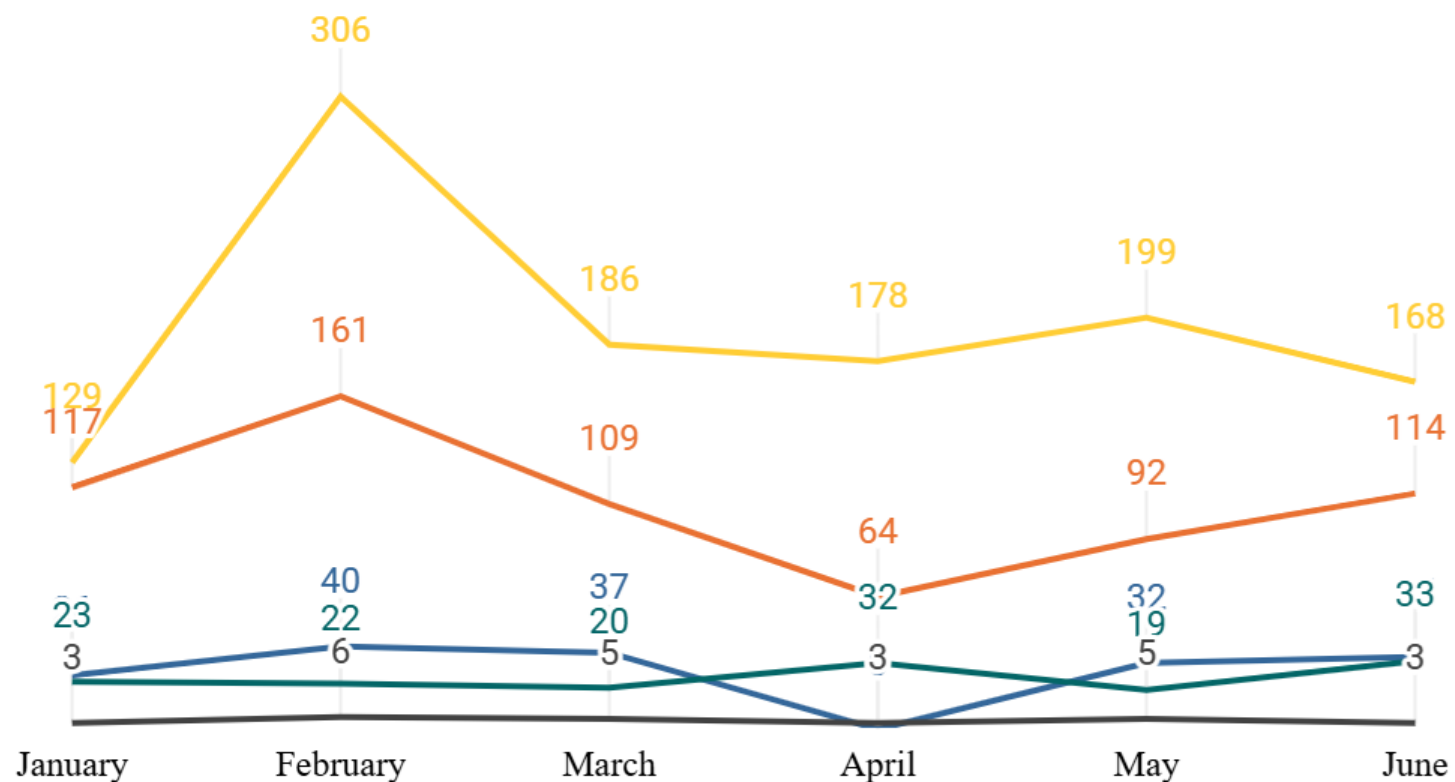
Q1 User engagement in Numbers

Q1 2024 vs All time user totals



April to June 2024 User Engagement Trends

■ Live Sessions Attendance
 ■ Online Courses Registrations
 ■ Certificates of Completion Issued
■ Sandbox Registrations
 ■ Help Desk Requests



All time User Community

24,192

+2,357

Unique DE
Africa map users

3,792

+67

Online Course
Registrations

987

+84

Certificates of
Completion
Issued

5,578

+545

Sandbox
Registrations

161

+11

Helpdesk
Requests



Demonstrating Impact

In Quarter 1, the communications team primarily focused on onboarding and establishing a common operational understanding between the PMO team, Synergy, and GA. Although communications implementation began slowly due to the onboarding process, it gained significant momentum by the end of May and into June. Social media activity was revitalized after experiencing a decline in early 2024.

The team developed and successfully initiated the soft launch of the Waterbodies Monitoring Service campaign, including the creation and dissemination of a press release. Additionally, Live Sessions were routinely announced and feedback was consistently provided, ensuring ongoing engagement with the audience.

Major Achievements, Events, and Milestones

- A corporate-style video was created to highlight Digital Earth Africa's implementing partners and reintroduce key PMO staff members present at the workshop in South Africa. The video is available on LinkedIn.
- The communications team also developed a Waterbodies Monitoring Service launch campaign, rolling out from the first into the second quarter. The campaign's objective was to raise awareness of Digital Earth Africa's scientific innovations, encourage product uptake, and drive users to the sandbox.



Social Media Engagement

X (Twitter)

Metric	April 2024	May 2024	June 2024
Total followers	7,055	7,116	7,156
Mentions by others	72	123	109
Retweets	18	63	50
New followers	32	58	40
Engagement rate	4.06%	3.84%	4,66%
Total tweets	6	24	13

LinkedIn

Metric	April 2024	May 2024	June 2024
Total followers	7,007	7,096	7,357
New followers	0	983	260
Post shares	26	26	40
Engagement rate	6.2%	5.47%	5,63%
Total post reactions	164	272	457
Total posts	5	20	18

Website

Metric	April 2024	May 2024	June 2024
Total users	3.3K	3.8K	2.9k
New users	2.9K	3.5K	2.6k
Returning users	809	858	744
Average engagement time	2m 55s	2m 55s	3m 56s
Views	15K	15K	17K



Acknowledgements





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