



Digital Earth
AFRICA

DE Africa Quarterly Progress Report

July - September 2024

About this report

This report is structured by Strategic Priorities, followed by Outcome Areas. It provides an overview of the progress achieved under each Strategic Priority Area. The overview of progress is also shown in relation to each Outcome Area.

- ❖ **Enhancing Country Engagement**

Encompasses Outcomes 1.4, 2.1, 2.2, 2.3 (Science, User Needs/ In country Engagement, Capacity Development and User Engagements)

- ❖ **Ensuring our Sustainability**

Encompasses Outcomes 1.1 and 1.2 (Governance, Program Delivery and Enabling Partnerships)

- ❖ **Enabling Climate Action**

Encompasses Outcomes 1.4A & B (Science and Platform)

- ❖ **Engaging the Community**

Encompasses Outcomes 2.3 and 2.4 (User engagement/ uptake & Demonstrating impact)

It covers the Quarter 2 period; July, August and September 2024. Excluded from the Report is Outcome 1.3 Sustainment and business model development as noted in the Annual Workplan Narrative.

To review the status of specific activities progressed for the quarter, [Quarter 2 Workplan Progress Tracker](#)

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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.



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

2024 Strategic Priorities



Enhance Country Engagement

Digital Earth Africa will work directly with countries to apply the continental infrastructure to support national priorities. This includes country-specific activities such as capacity development, co-designing workflows, and creating tailored data products. DE Africa will engage national governments, Implementing Partners, and governance structures to understand each country's context, address key challenges, fill information gaps, and build capacity.



Ensure our Sustainability

Digital Earth Africa will maintain sustainability by reinforcing the roles of the Governing Board and Technical Advisory Committee. The programme will merge its strategies into a single document as part of developing a 5-10 year plan, while updating operational frameworks to align with ISO standards for good governance. This ensures continued focus on effective decision-making, transparency, and inclusion, supporting long-term success.



Enable Climate Action

Digital Earth Africa will continue prioritising climate action in 2024, recognizing Africa's vulnerability to drought, floods, and rising sea levels. The program will develop new tools and services to support climate change mitigation, adaptation, and decision-making processes. By engaging with in-country users, DE Africa aims to promote the use of its services for impact assessments and National Adaptation Planning initiatives.



Engage the Community

Digital Earth Africa is focused on increasing the uptake of its platform by aligning services with country-specific use cases and enhancing outreach and engagement. The program will support country-level capacity building and strengthen institutions to promote the use of both existing and new products, aiming to maximize impact.

Q2 Program Highlights



8 use cases
published



5 Learning
Institutions



3 New Notebooks



144 users
completed training



3 Climate action
training in priority
countries



11 Countries
Engaged



1 Continental Service
launched: Waterbodies



40+ of Diverse Users

Quarter 2 Progress Summary

As we reach the halfway mark of the [DE Africa 2024 Annual Workplan](#), significant strides have been made under each of the programme's Strategic Priorities, with key achievements aligned to our defined [Outcome Areas](#);

Enhancing Country Engagement

Our focus on deepening country-level relationships has yielded positive results, particularly in three key opportunity countries: Kenya (KSA), South Africa (SAIAB, DWS-Western Cape, SANBI, UP), and Ghana (All Nations University). Kenya has seen strong progress with key national interactions. In addition, several other engagements across African countries are helping drive our broader strategy of advancing national-level partnerships. Notably, seventeen (17) capacity-building sessions were conducted across eight (8) countries (Congo, Ethiopia, Kenya, Malawi, South Africa, Tunisia, Zambia, and Zimbabwe), with a blend of twelve (12) virtual and five (5) in-person sessions, supporting sustainable growth in geospatial knowledge across the continent. The program further engaged with Australian High Commissions in Nigeria, Zimbabwe and Mauritius and developed a communications toolkit to enhance outreach and engagement at a National level.

Ensuring our Sustainability

We have made measurable progress toward ensuring DE Africa's long-term sustainability. Governance Self-Assessment surveys have been completed, paving the way for the appointment of Interim Advisory Board (IAB) members in the next quarter. Our strategic partnership with the International Water Management Institute (IWMI) continues to strengthen, with collaborative projects progressing across various African regions. Additionally, one of our key Implementing Partners finalized and signed their newly approved workplan, reinforcing the operational stability of the programme



11 Countries Engaged with in Q2,

- **Northern Africa:** Tunisia
- **East Africa:** Kenya, Ethiopia
- **Southern Africa:** South Africa, Malawi, Zambia, Zimbabwe
- **West Africa:** Ghana, Gambia, Tunisia
- **Central Africa:** Congo
Madagascar

Quarter 2 Progress Summary

Enabling Climate Action

We have deepened our scientific collaborations with multiple national government agencies, resulting in the development of three (3) new analytical Notebooks: *Algal Bloom Detection*, *Waterbodies Animation*, and *the Integration of Google Drive into Sandbox*. These tools are designed to enhance data accessibility and support decision-making in critical environmental areas. Additional thematic efforts have focused on *Water Quality Monitoring*, *Biodiversity Mapping*, *Agricultural Monitoring*, and *Marine and Coastal Ecosystem Monitoring*, addressing key environmental challenges and promoting sustainable management of natural resources across Africa.

Engaging the Community

Our outreach efforts have remained robust, with the publication of ten (10) articles and eighty-two (82) social media posts promoting DE Africa's mission. Furthermore, we have presented at fifteen (15) conferences, workshops, and dialogues, both virtually and in-person, across multiple countries (Australia, China, Gambia, Ghana, Madagascar, Kenya, and the United States). These efforts have significantly raised the profile of the programme and strengthened our connections within the global and regional geospatial communities.



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- **Northern Africa:** Tunisia
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- **West Africa:** Ghana, Gambia, Tunisia
- **Central Africa:** Congo
Madagascar



Enhancing Country Engagement

Collaborative efforts in Kenya



- Key engagements took place with Kenya in the last quarter;
- Discussions to support the use of the platform for land use/land cover classification with the Kenya Space Agency (KSA).
- KSA have also explored how they might deploy their own data cube instance to incorporate national data with Earth Observation data provided by Digital Earth Africa.
- The platform team was able to provide advice on managing this initiative so that the KSA could meet national reporting requirements.
- Participation in the RISA Kenya Innovation Ecosystem Workshop, where stakeholder mapping was done in thematic areas agriculture, urban planning, disaster and water resources.
- DE Africa participated at the State of the Map Kenya. The sponsors of the event included Esri, who showcased their work with partners via Africa GeoPortal including Digital Earth Africa. <https://2024.stateofthemap.org/>



DE Africa at RISA Kenya Innovation Ecosystem Workshop, Nairobi,



DE Africa at State of the Map- Kenya, Nairobi,

Science and training engagements in Kenya



Science Engagements

- The release of the waterbodies service enables monitoring of changes to inland aquatic ecosystems. Numerous examples of both wetting and drying trends have been identified and described with the waterbodies service, including the well documented Lake Baringo in Kenya. Since the original [blog](#) was published, the waterbodies services now makes the wetting trend easily visible to a wide range of users on Maps. It is envisaged that this service will inform better **adaptation and mitigation decisions to changes in aquatic ecosystems**.
- Work has continued towards the development of a continental wetlands workflow. This has involved detailed processing of complex terrain indices. Preliminary testing of the workflow has been undertaken for Kenya in partnership with RCMRD
- The team have also been exploring novel approaches to using and applying DE Africa data, including by working with the Kenya Space Agency to implement a land cover classification methodology using the R package SITS (Satellite Image Time Series Analysis for Earth Observation Data Cubes) in partnership with package developers at the Brazil Data Cube.



Training Engagements

- Provided virtual training together with and CSIR (Council for Scientific and Industrial Research in South Africa) for Kenya Marine and Fishery Research Institute (KMFRI), as part of the GMES and Africa MARCOSIO initiative. The training was entitled Earth Observation in support of Marine Aquaculture in Kenya. It covered an overview of DE Africa, **coastline service, water quality algorithms and mangrove monitoring tools**.
- DE Africa held a pre-conference training at the RCMRD/ AfriGEO Conference held in Kenya. The training highlighted DE Africa's products and its role in empowering countries in Africa to access analysis-ready data and respond to climate action.
- DE Africa was invited by Youth Pawa, a youth-led environmental movement in Kenya, to an interactive workshop, "Co-Creating Solutions," The workshop **focused on pollution, green spaces, and green jobs**.

Collaborative efforts in South Africa



DE Africa engaged with National Research Foundation's (NRF) South African Institute for Aquatic Biodiversity (SAIAB) to explore and support **biodiversity mapping** in South Africa. Opportunities included supporting **water quality and aquatic ecosystems monitoring and integration with external high resolution data**.



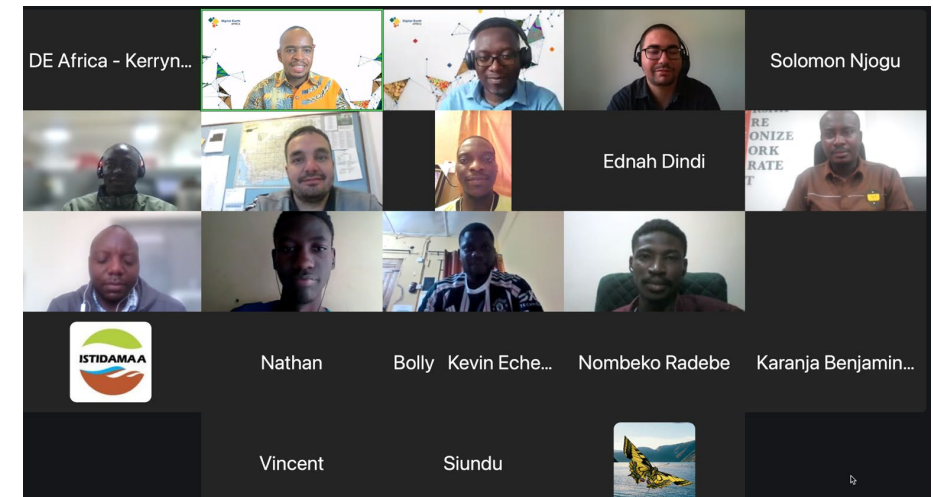
Training Engagements

- DE Africa participated in an online session at the Western Cape Integrated Provincial Water Monitoring Workshop chaired by The Department of Water and Sanitation. The presentation focused on the role of Earth Observation in support of **water monitoring**.
- DE Africa as a Partner to the African Earth Observation Challenge held two Masterclasses in English and French to participants of the challenge. The English session had 25 participants and French had five participants. The masterclass provided hands-on understanding of how to interact with Digital Earth Africa's decision-ready data sets and continental services.
- DE Africa provided two training sessions to YouthMappers at the University of Pretoria. 30 participants attended on site and another 10 joined online. The participants were introduced to the DE Africa platform and worked in the Sandbox using some of the notebooks.



Science Engagements

- The South African National Biodiversity Institute has also had detailed involvement in the development of the wetlands workflow; work has continued towards the development of a continental wetlands workflow. This has involved detailed processing of complex terrain indices. Preliminary testing of the workflow has been undertaken South Africa with SANBI.
- The science team has supported numerous use cases on a range of topics including urban green space monitoring, algal bloom detection, land cover classification with SANBI.

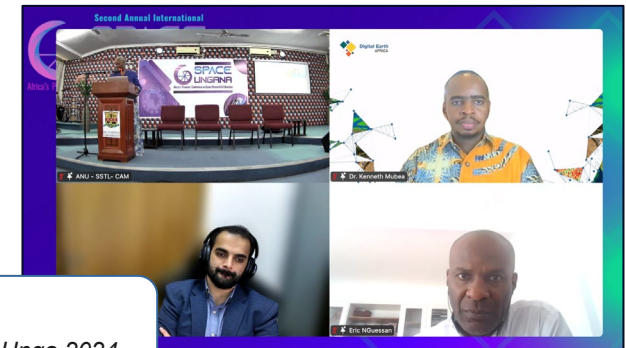
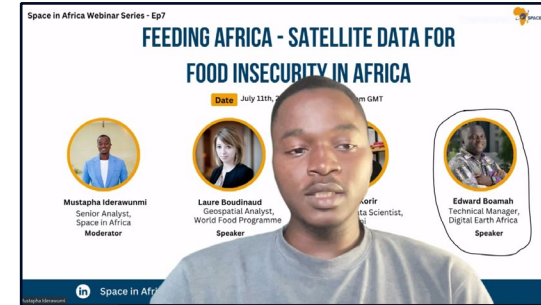


Collaborative efforts in Ghana



Community Awareness Presentations

- DE Africa provided an online presentation at the Feeding Africa - Satellite Data for Food Insecurity in Africa. DE Africa presented on "Feeding Africa - Satellite Data for Food Insecurity in Africa" during the Space in Africa Webinar series. The presentation highlighted the role of the DE Africa's tool to **monitor crop extent, health and empowering crop productivity from space**.
- DE Africa provided an online presentation at the Space Unga 2024 held at All Nations University in Ghana. The event gathered participants from academia, advocates, policy makers, technocrats and industry leaders interested in advancing the development of space in Africa. DE Africa presented on 'Our Future Satellite', highlighting DE Africa's role in providing insights that support sustainable development.



Online Presentation at Space Unga 2024,
University of Ghana

Engagements with Other African Countries

Region	Country	Organisation	Thematic Area
Central Africa	Congo	International Congo-Ubangui-Sangha Commission (CICOS)	DE Africa held an online presentation at the International Congo-Ubangui-Sangha Commission (CICOS) and University of Ghana joint training under GMES and Africa program. The training highlighted DE Africa coastline service in supporting marine and coastal ecosystems .
East Africa	Ethiopia	IWMI	DE Africa and IWMI provided a F2F training to participants from the Ethiopian governmental departments on how to use DE Africa platform including an overview on crop health monitoring, water extent monitoring and develop use cases as per their organisations.
Southern Africa	Malawi	State of the Map Malawi	DE Africa presented online at the State of the Map Malawi Malawi University of Science and Technology Youth mappers. DE Africa provided an overview of the platform including examples of the Youth mappers Technical Challenge, a demo of the DE Africa sandbox including examples of forest monitoring .
	Zambia	Aquatic Foods Initiative MSPs	DE Africa provided a virtual presentation on opportunities for synergies with the Aquatic Foods Initiative MSPs in the Lower Kafue River Basin to the Working Group Activities Operationalizing a nexus approach in the Lower Kafue Basin. Among key areas of analysis, participants highlighted LULC, water, and crop monitoring .
	Zimbabwe	EOSTAT Field Boundary Digitising Mapathon	DE Africa provided a virtual presentation at the EOSTAT Field Boundary Digitising Mapathon at the National University of Science and Technology, Zimbabwe. The event was organised by FAO. DE Africa showcased the ongoing work with FAO on crop types/field boundaries mapping . The participants were informed of the availability of analysis-ready data and the crop type mapping workflow.
West Africa	Tunisia	Institut National de Statistique (Tunisia). Tunisia Statistics	Digital Earth Africa provided a series of online sessions focused on coastline monitoring, water resource monitoring and crop health monitoring to the departments of water, and department to agriculture.

Partnerships and Collaborations

Vikara Institute	A Letter of Collaboration was sent, focusing on Enhancing the awareness, access, and utilisation of satellite data for market systems programming and decision-making within the international development sector across Africa. There have been delays on the side of Vikara Institute and we are awaiting next steps related to receiving the signed Letter of Collaboration for further engagement in Quarter 3.
AWS	The partnership with AWS continues to be of value for both parties with AWS recognising DE Africa's contribution as both a data user and provider. DE Africa's continental products and services derived from Sentinel-2 and Landsat data stored on AWS are themselves made available through the Open Data Registry and S3 buckets. Discussions have continued with AWS on how both parties can best leverage the engagement, including by securing credits for computation on future continental products and services such as water quality, and by showcasing the impact of DE Africa.
ESRI	<p>The ESRI partnership continues to evolve with regular monthly meetings. Some joint activities included;</p> <ul style="list-style-type: none"> • a joint training workshop with DE Africa was conducted. • a series of Africa GeoPortal refresher trainings started in Q2 , • ESRI will be presenting at DE Africa live sessions in October 2024, with sessions planned in French, Arabic, and English to engage different linguistic audiences across Africa. • Ongoing promotion of DE Africa's services through the Africa GeoPortal by ESRI.
IWMI	DE Africa and IWMI Ethiopia co-developed an online learning module titled Introduction to the Analysis of IWMI's Water Data Products through Digital Earth Africa and will help participants gain more knowledge of Digital Innovations for Water Secure Africa (DIWASA) through DE Africa. The course can be accessed https://learn.digitalearthafrika.org/courses/course-v1:IWMI+DIWASA1+2024_10/course/ . The new online training module will impact trainees with skills to access and use analysis ready earth observation data to inform decision making in integrated watershed management. This will increase the community of practice of earth observation data and products for an improved understanding of water availability and water use in DIWASA countries. There are planned kick off workshops on the DIWASA DE Africa collaboration in Ghana and Zambia, and DE Africa is expected to provide training to end users from ministries of water and agriculture. IWMI has also been working with the team to develop and incorporate Jupyter Notebooks on hydrology into the DE Africa notebooks repository.

Implementing Partner Workplan Progress

AFRIGIST	CSE	RCMRD	AGRHYMET	OSS
Contract signed; preparing for capacity building activities to Ministry of Agriculture in Abuja, Nigeria (Dec 2024), training to Ministry Of Water in Benin (Jan 2025), and online training in water and agriculture in March 2025).	Contract signed; working on coastal and wetland workflows, with plans for dissemination at upcoming conferences.	Contract signed; developing mapping services and securing grants to include women in wetland monitoring initiatives.	Workplan Submitted for Approval; Activities Proposed: crop type mapping in support of food security assessments in Niger and Burkina Faso.	Workplan Submitted for Approval; Activities Proposed: Land degradation service in support of SDG 15 reporting.

Summary of IP progress July to Sept 2024

https://docs.google.com/presentation/d/1GTUqvv_rMOylerK8RntO0qi_LC19Wgy0/edit?usp=sharing&ouid=106732919198486776652&rtpof=true&sd=true



**Ensuring our
Sustainability**

Governance and Programme Delivery

Governance

- DE Africa's strengthened governance structures, including the finalised [Internal Operating Governance Document](#).
- The updated TAC governance monitoring strategy and accompanying survey were shared with TAC members. The results were synthesized and will soon be circulated to TAC members for further review.
- The updated governance monitoring strategy and survey were distributed to GB members. The results were compiled into a comprehensive report.
- The Secretariat used these responses to review and update the DE Africa governing board's terms of reference and competencies for the interim period while a long-term host is obtained. Following consultation with Governing Board Co-Chairs an out-of-session endorsement was sought from the Governing Board for the appointment of an Interim Advisory Board (IAB).
- An RFP for a service provider to manage the recruitment process is in development, with the IAB expected to be appointed by the end of November 2024. These steps are critical for finalizing the IAB recruitment in Quarter 3.

Resourcing

- The recruitment for the Communications Officer was initiated during Quarter 2, garnering 198 applications in total. The interview and appointment process is expected to be finalised in Quarter 3.
- The hiring process for the Secretariat/Bookkeeper will also be completed in Quarter 3.
- A contractor for PR and Communications was appointed to support writing activities for Communications.
- A Platform Lead role was advertised and distributed to various networks. 8 applications were received along with one subcontracting proposal for the role. Of the 3 shortlisted candidates, 2 were interviewed, while one candidate withdrew their application. Unfortunately, the salary expectations of the most suitable candidate exceeded the budget allocated for the position. Consideration is being given to procure managed services from a suitable company and this will be completed in early in Q3

Governance and Programme Delivery

1

Technology Integration

In efforts to streamline processes and create operational efficiencies, we have reviewed Polyloop, an AI-driven evaluation and outcomes operating system designed to support evidence-based insights and impact reporting. We are exploring how Polyloop's advanced software can help Digital Earth Africa improve our planning and reporting and assist us in evaluating the impact of our activities against strategic priorities. In addition, we have been reviewing our CRM tool to improve the efficiency of capturing In-Country and Partnership engagements. We identified Caspio, a software solution that enables us to create customised tools, automating Excel spreadsheets into a user-friendly platform with dashboards.

2

Risk Management

The first Risk review committee was held with the Interim Host. The [risk management plan](#) was finalised and the [Risk Registers- V7](#) were reviewed and updated accordingly with rationale for changes captured in the [minutes](#).

MEL Framework Review and Benefits Realisation development

The first phase of the Benefits Realisation work commenced in mid-July, managed by the Synergy group; this phase was completed on the 21st of August, concluding with the development of Benefit measures and Planned Benefit Results (PBR) for the '*Strengthening Livelihoods Benefit*'.

3

A comprehensive set of templates were created to support the DE Africa team in developing the remaining three benefit measures. and establishing an overarching Benefit Realisation Framework. With the completion of Phase 1, preparations for Phase 2 are underway, which will involve similar processes for the remaining three benefit themes. Following phase 2 and the development of the remaining 3 benefit logic models, an overarching Benefit Realisation Framework will be developed during Phase 3.

Although the BR work is not yet complete, and as such the overarching MEL Framework – it is and will still inform the development of the 25/26 annual work plan, particularly because the team has already completed the work on outlining and re-defining the Benefit Measures and associated impact statements, and the basis of the BR work, the MEL Framework ToC and Investment Logic have not changed

Promoting Diversity and Inclusion



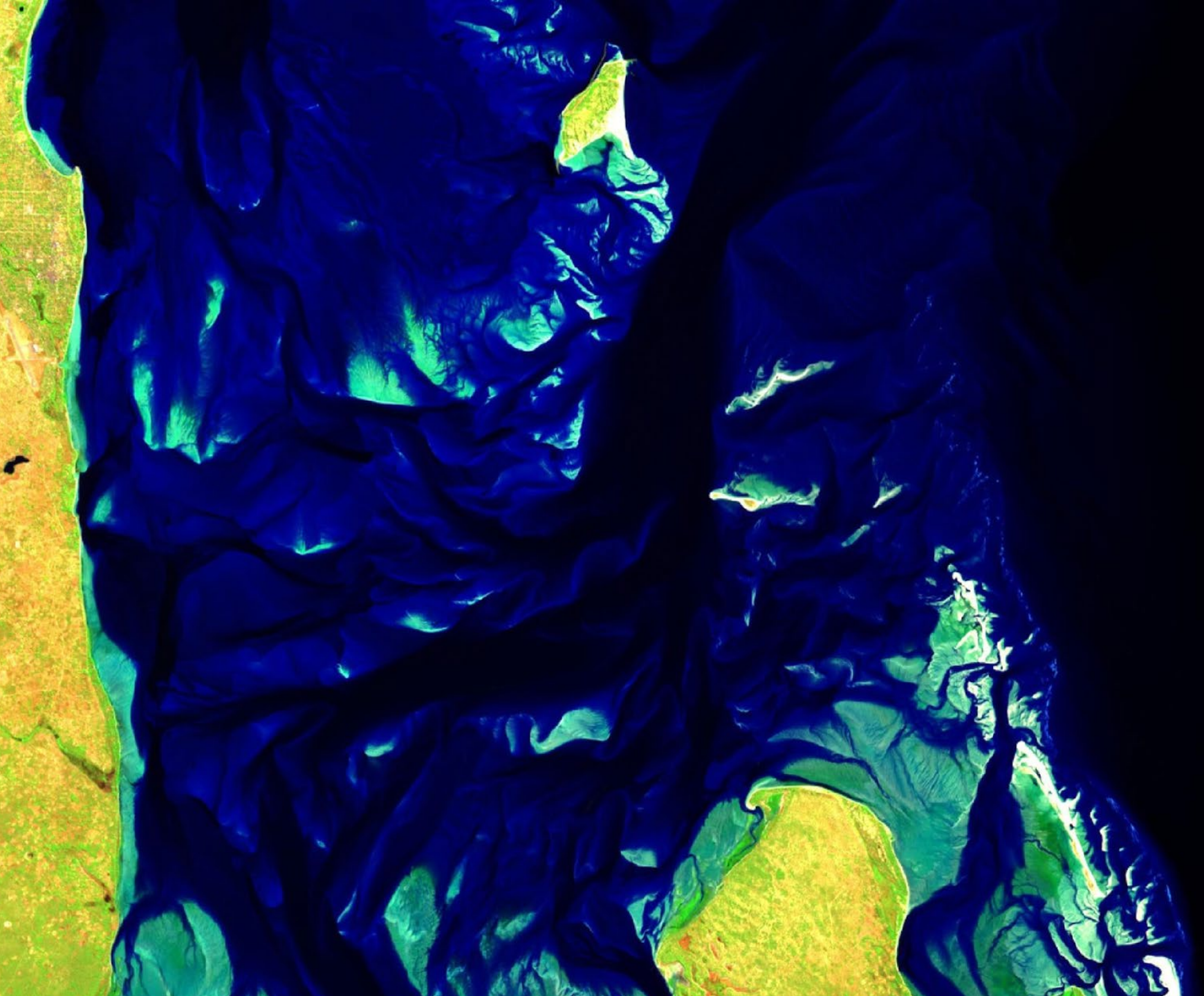
Collaborative Working Group

DE Africa made significant strides in its Diversity and Inclusion efforts by hosting its first Collaborative Working Group (CWG). The meeting reflected strong interest and engagement from participants.. The discussions and engagements laid a solid foundation for continued efforts to foster diversity, inclusivity, and cooperation within the DE Africa community.



Hackathon Sponsorship

DE Africa sponsored the Bxrderless Hackathon, a climate tech initiative born from previous hackathons supported through Africa Women in GIS (AWIGIS). The hackathon saw the development of an advanced precision agriculture system designed to improve farming practices in South Africa's Vhembe District. Initially expecting 50 participants across 10 teams, the event received 229 applications, of which 57 were successful. These participants, ranging from tertiary students to early professionals, attended a training session of the DE Africa Sandbox and technical support during the Hackathon.



Enabling Climate Action

Science

1

Workflows

Work has continued towards the development of a continental wetlands workflow. This has involved detailed processing of complex terrain indices. Preliminary testing of the workflow has been undertaken for Kenya in partnership with RCMRD, South Africa with SANBI, and Senegal with CSE.

2

Datasets and notebooks

High spatial resolution data from Norway's International Climate and Forests Initiative (NICFI) has been made available on the platform for visualisation purposes. A notebook has been added to the repository and documentation published for this data. Ongoing work has developed functions which load data from the Water Productivity through Open access of Remotely sensed derived data programme (WaPOR). The datasets notably include evapotranspiration and vegetation productivity layers which will complement the current data catalogue. Updates have been made to the Global Mangrove Watch dataset and notebook, and to the coastal erosion notebook.

3

New data pipelines

Work has begun with Sinergise to host new Sentinel data on the platform, including the Sentinel-1 monthly mosaic, Sentinel-3 surface reflectance and temperature, and Sentinel-5P atmospheric monitoring.

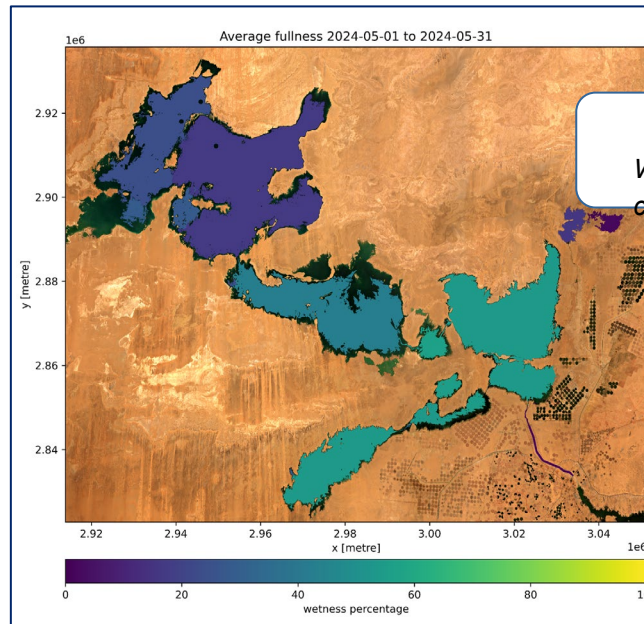
The science team has been working to estimate storage requirements for these new datasets. Work with Sinergise will also ensure compliance with CEOS ARD specifications where applicable.

Science

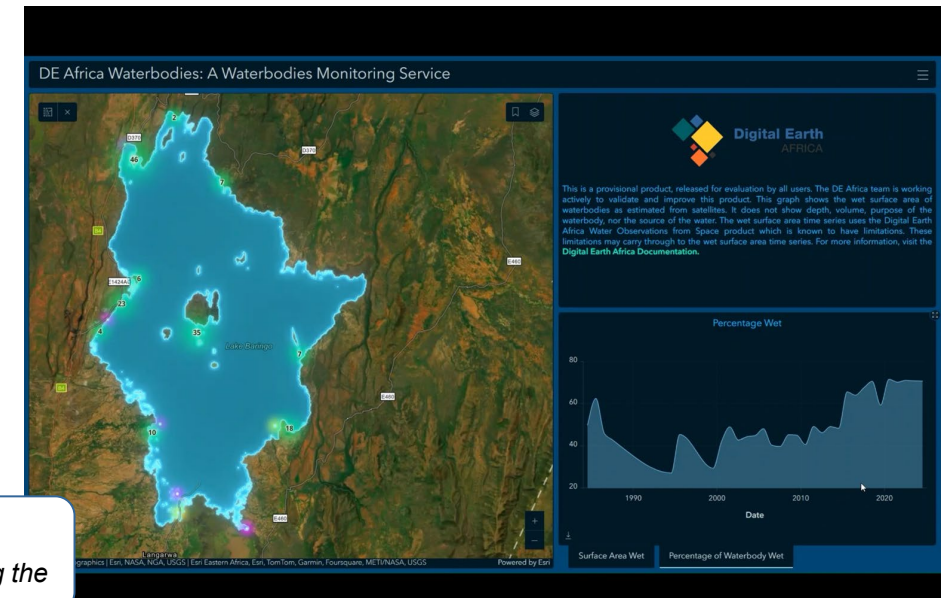
Continental Service Development

Since the waterbodies continental service has been delivered, work has continued to refine the methodology for specifying polygons, including removing gaps in polygons. The database attributes attached to each waterbody have also been refined. This includes the addition of a 'last valid observation' field.

As a natural and logical extension of the waterbodies service, work is now underway to scope a continental water quality service. The science team has been experimenting with different approaches to monitor water quality indicators such as chlorophyll and turbidity. It is envisaged that incorporation of new data pipelines for Sentinel-3 will also support this work.



A dashboard showcasing the waterbodies continental service.



Technologies



Software Updates

Numerous software updates which contributed to the advancement of the platform have been made, including several EKS upgrades, and upgrades to the Explorer and Geoserver. The Sandbox image was also upgraded and new Python packages were added. This all contributed to the ongoing uplift of the platform.



Continental Service Support

The platform team supported the development and refinement of the waterbodies service by developing the config and database structure and backup protocols. Assistance was also provided with processing for waterbodies. Related to this, documentation and processes for estimating the cost of computations were improved, including for the use of Kubecost. This occurred under a general uplift in documentation and process management across the team.

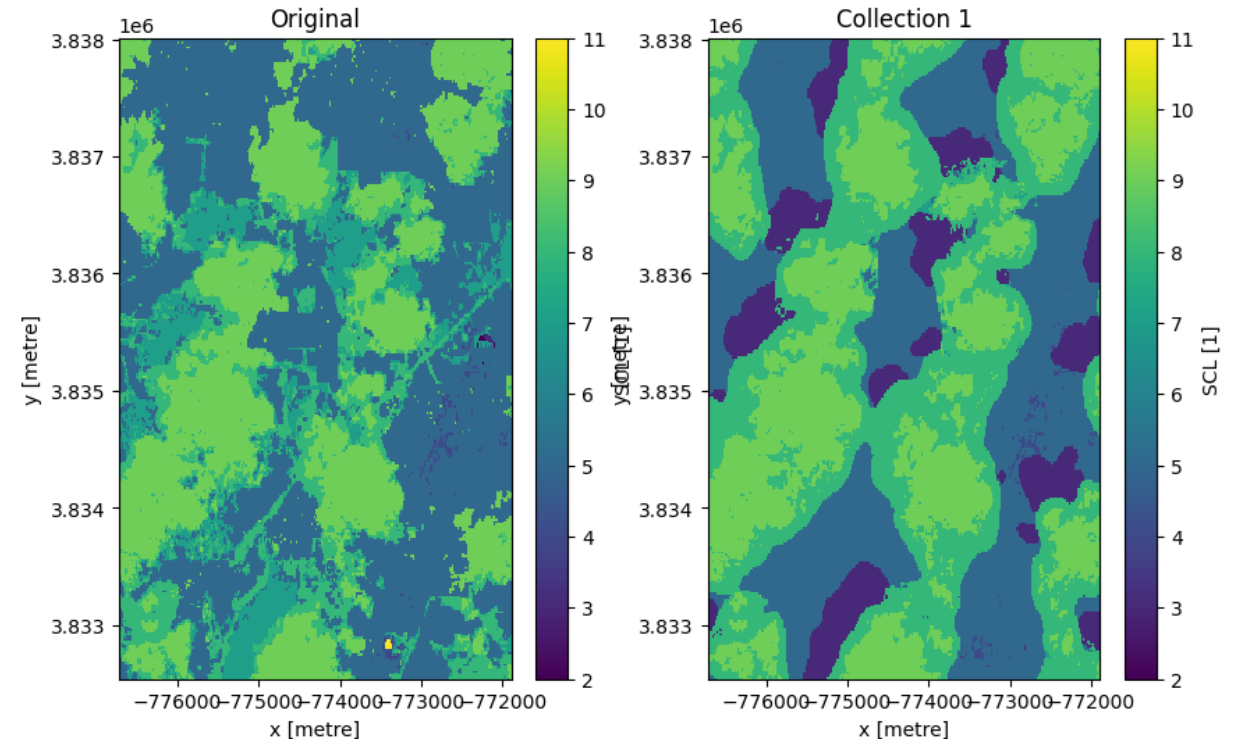
Technologies



Support of Datasets

In terms of support for datasets, an upgrade was made to the Global Mangrove Watch dataset and progress was made on updating Landsat and Sentinel-2 derivatives. These had been delayed due to duplicates in the Landsat-9 archive and gaps in the Sentinel-2 archive. Archiving and gap-filling processes has resolved these constraints and several derivatives have now been run for 2023, including Fractional cover and Water Observations from Space.

The reprocessing of Sentinel-2 into Collection 1 has absorbed some time from the platform team. Test data has been loaded into the dev environment and testing has begun to ensure alignment. Functions to work with the data, such as 'load_ard()' have been updated in preparation for the complete reprocessed archive to be available in prod. Updates made to the mask band look promising with notable improvements in cloud shadow masking. A decision will be made as to whether derivatives will be back processed or only forward processed with the new collections once further testing and comparisons have been undertaken.



A comparison of the mask band for the Original Sentinel-2 collection and Collection-1.



Engaging the Community

Capacity Development and User Engagement

DE Africa employs a multi-faceted user engagement strategy, leveraging virtual live sessions, online and in person training sessions, and diverse communication channels to reach a wide range of stakeholders. This inclusive approach enables DE Africa to effectively share knowledge, gather feedback, and foster a growing community of EO enthusiasts and advocates across the African continent.

In Q2, as part of the development of the updated DE Africa Capacity Development Strategy (CDS), several workshops were held for internal review and team brainstorming. The initial draft (Draft 0) is set for internal review in early October 2024, with Draft 1 expected to be finalised by the end of October 2024.

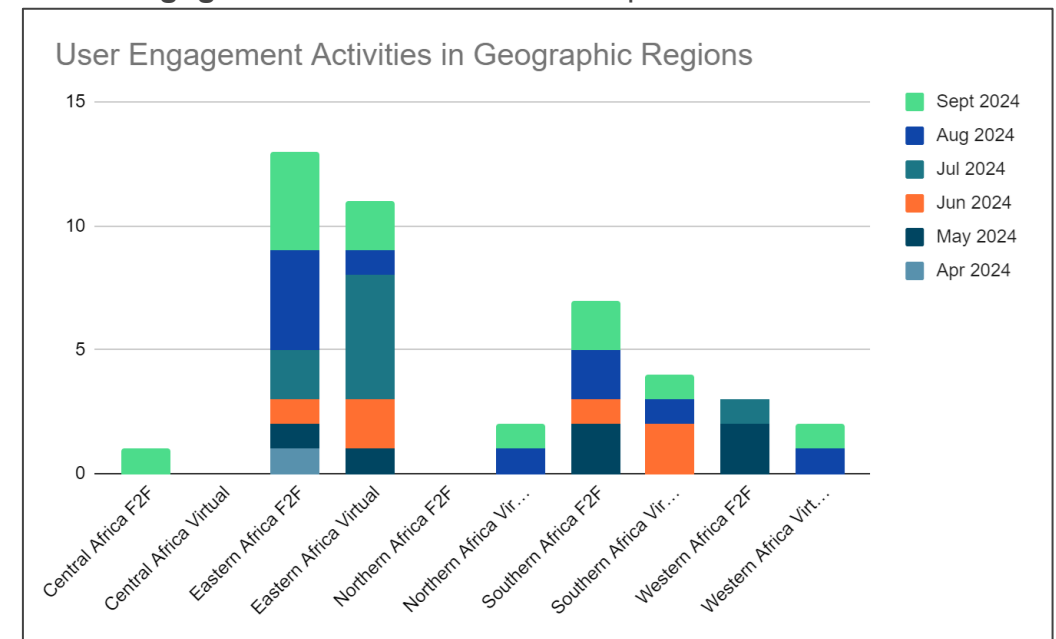
A total of 10 country engagements in Q2, the programme has continued to strengthen its engagements in the three (3) opportunity Countries identified for 2024; Kenya, South Africa and Ghana. In addition to these, the team engaged with eight (8) other countries in the quarter.

The thematic areas focused on were Water Quality Monitoring, Biodiversity Mapping, Agricultural Monitoring, Marine and Coastal Ecosystem Monitoring, with a total of twenty (20) training sessions undertaken; six (6) F2F trainings and fourteen (14) virtual training sessions.

A total of seventeen (**17**) **training sessions** were held across **eight (8) countries**; Congo, Ethiopia, Kenya, Malawi, South Africa, Tunisia, Zambia and Zimbabwe. 12 were online sessions and 5 were F2F sessions.

An additional **fifteen (15)** presentations were made at **conferences or workshops** held either online through global initiatives or F2F, (Australia, China, Gambia, Ghana, Madagascar, Kenya and America).

Total of **32 engagements** were undertaken in quarter 2.



User Engagement Statistics

DE Africa conducted 12 [DE Africa Live Sessions](#) in English and French and had participation of 100 persons including 23 women, 77 men. DE Africa online course registration was 417 persons with 144 persons receiving certs of completion (quarter 1 was 206 persons enrollment with 52 certificates).

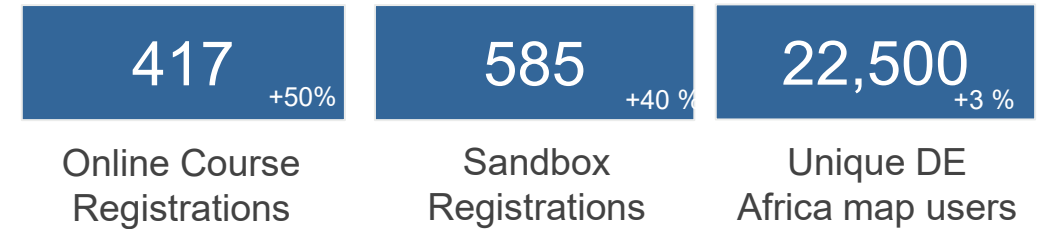
DE Africa sandbox registration was 585 persons in quarter 2 (quarter 1 was 367) and quarter 1 and 2 have contributed so far 952 registration, which is almost half way against the annual target of 2000 sandbox registrations. This has been attributed to the various online and face to face engagements.

DE Africa can now boast over 22,500 unique map users.

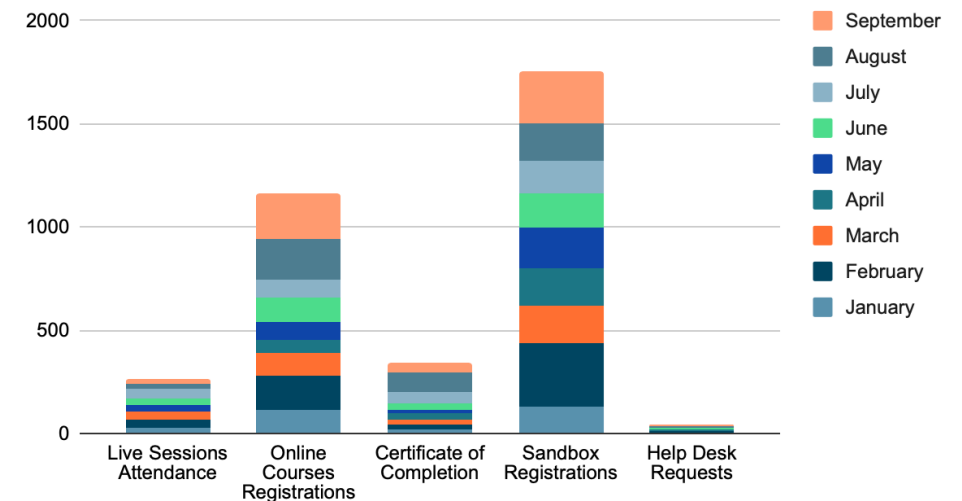
Some of the DE Africa live session topics

- Near real-time burnt area mapping session in English <https://youtu.be/D08RraHtew0> and French <https://youtu.be/bdyy5XK5YOI> showcasing fire event at Cape George, South Africa
- Using Digital Earth Africa Explorer in Africa GeoPortal in Esri in English https://youtu.be/uNnAa3x_Bes and French <https://youtu.be/Uh4iUPN29s8> showcasing DE Africa and Esri collaboration in helping end users access DE Africa services to improve their work flows
- Identifying active irrigated cropping in English <https://youtu.be/mk0sFIKTi90> and French <https://youtu.be/MREvMbvbB3dw> showcasing DE Africa providing insights into management of irrigation schemes and support agriculture and food security

All time User Community



2024 Monthly User Engagement Breakdown



Communication and Promotion

The communications and engagement efforts for Quarter 2;

July focused on creating content for DE Africa's website, with four articles targeting themes such as **climate action, food security, and sustainability**. These articles showcased user case studies and academic insights:

- [Climate change champion Abdulai Alhassan uses Digital Earth Africa to monitor environmental changes](#)
- [Digital Earth Africa Sandbox a critical resource to curb deforestation in Northern Ghana](#)
- [Geospatial Technologies To Inform Agricultural Production In Rwanda](#)
- [Digital Earth Africa a gamechanger for policymakers](#)

August continued with content creation and a comprehensive audit of the website's navigation and structure. A communications update was prepared for Geoscience Australia covering DE Africa's activities. Three articles were published, covering topics such as **livestock sustainability, agricultural yields, and water quality**.

- [Leveraging Digital Earth Africa's products to understand African livestock sustainability](#)
- [Delivering higher yields from farm to market](#)
- [EO data measuring ecological threats to Harare's water supply](#)

Communication and promotion

In September, key achievements included securing broadcast interviews for Dr. Lisa-Maria Rebelo with **CNBC Africa** and Waterbodies Service broadcast interview on **Channel Africa** to raise awareness about Digital Earth Africa, with a particular focus on promoting the **Waterbodies Monitoring** Service.

Efforts were also directed towards developing a communications toolkit for Australian High Commissions across Africa, aimed at enhancing outreach. Additionally, connections were strengthened with key stakeholders from governmental and continental organisations to drive awareness and uptake of Digital Earth Africa's services.

During this period, three articles were published in September.

- [Unlocking the power of earth observation data](#)
- [How Jokotola Omidiji studies the impact of nature on historic heritage sites with Digital Earth Africa datasets | Digital Earth Africa](#)
- [Questioning the relationship between biological communities and the deterioration of cultural heritage | Digital Earth Africa](#)



Unlocking the power of earth

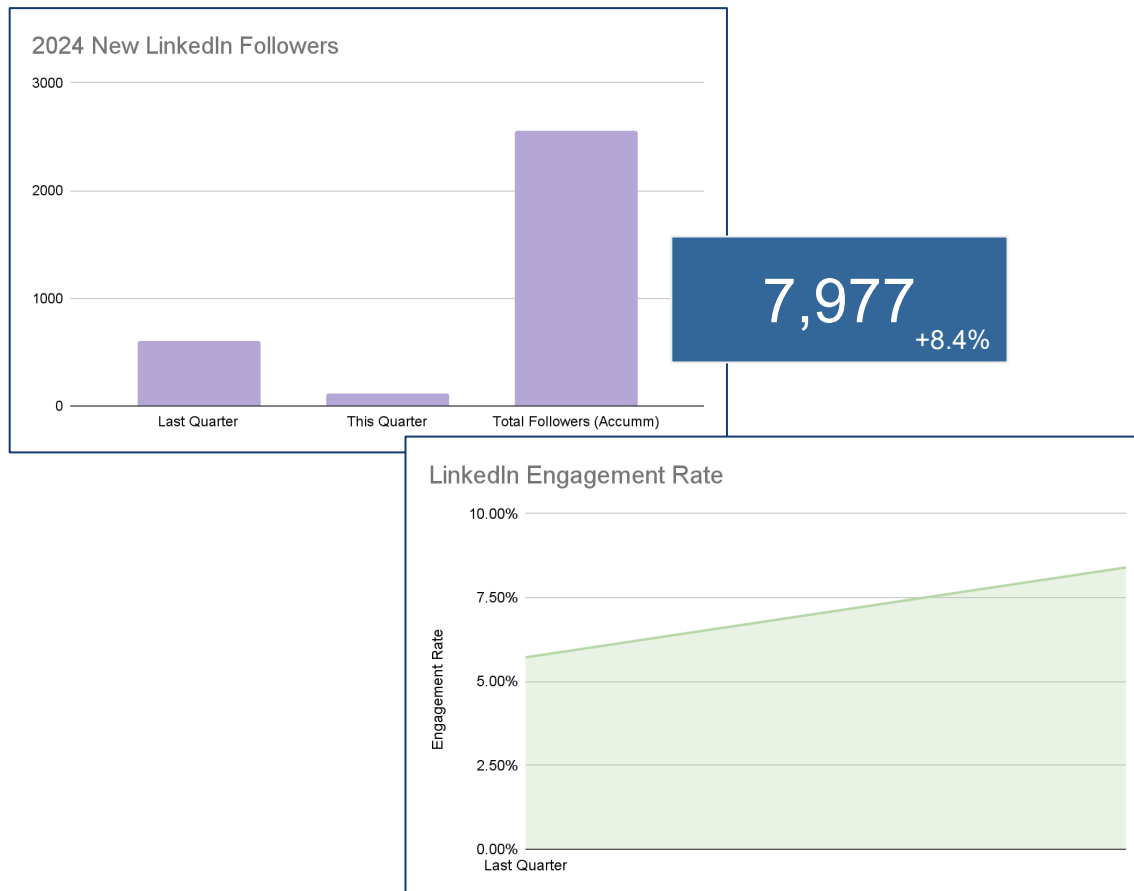
Channel Africa
2024-09-16 08:36:56
16 Sep 2024 @ 08h30 - Digital Earth Africa
0:00 / 8:27
Download Clip

Digital Earth Africa launched the first-of-its-kind water bodies monitoring service offering 40 years of detailed Earth observation data on African water bodies like lakes, reservoirs, wetlands, and rivers to enhance water resource management and conservation across the continent.

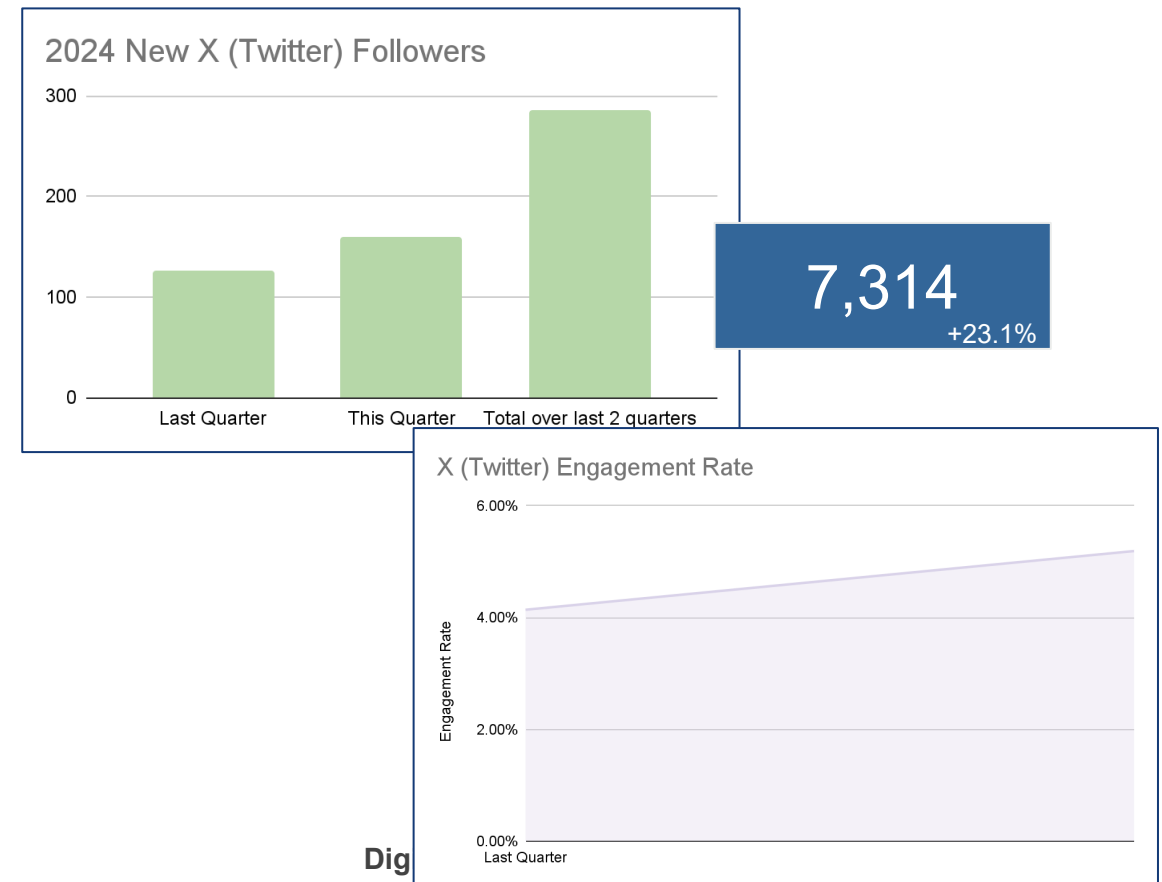
<https://www.cnbcafrica.com/media/6360088562112/unlocking-the-power-of-earth-observation-data/>

Social Media Stats - LinkedIn and X Metrics

LinkedIn: New followers grew by 111, with an 8.4% percentage increase and a 49.4% jump in engagement. The best-performing posts highlighted DE Africa's participation in international conferences and key events.



X: DE Africa's social media engagement on X has been strong, with a total of 7,314 followers and a 5.19% engagement rate, surpassing industry standards of 3-5%. Notable achievements include a 23.1% increase in new followers and a 25.9% rise in engagement over the review period.



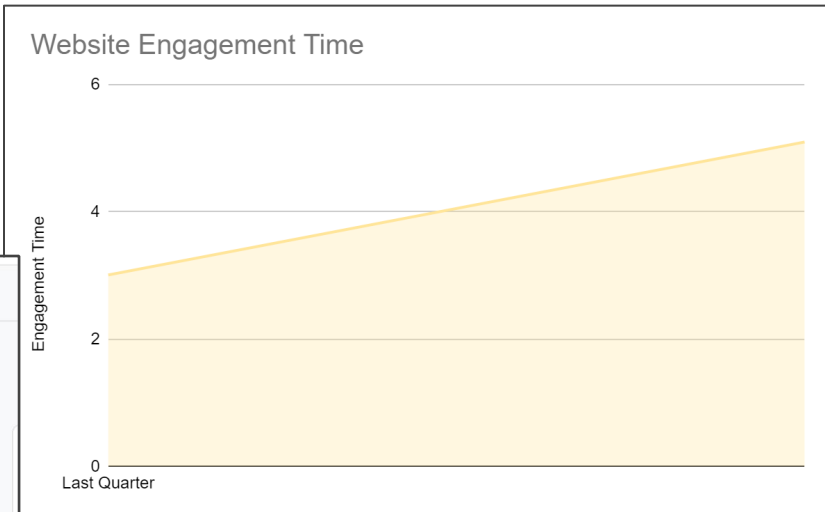
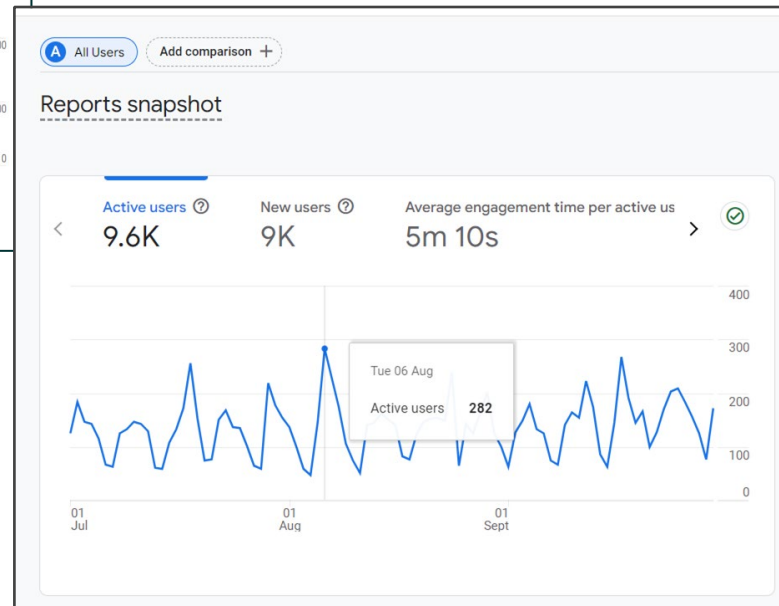
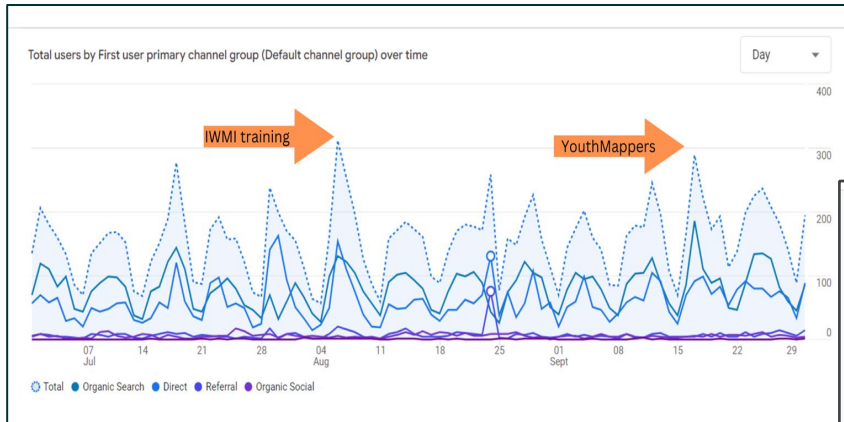
Website Metrics

Website: Users over this period - both active users (users) and new users (no. of users who interacted with the website for the first time - triggering first_open) has remained similar to Q1. In Q2 there was a stronger average engagement time per active user, from 3m 07s in Q1 to 5m 10s in Q2.

During the period under review traffic came from a number of different countries. Opportunity countries feature in the top 10.

9,800

Website



Note:

- Organic search: click through from Google or search engine
- Direct search: direct access of web address
- Referral: accessing via other websites linking to Digital Earth

Participation in Conferences, Dialogues and other

Region	Country	Organisation	Details of Participation
West Africa	Anglophone and Francophone West African Countries	GMES and Africa & University of Ghana	The training was organised in collaboration between the Marine and Coastal Areas Management Project (MarCNoWA) and Digital Earth Africa. University of Ghana's Regional Marine Centre leads MarCNoWA Consortium of the GMES-Africa Programme which provides essential coastal and marine services across 18 countries. The training focused on the use of EO data for monitoring marine and coastal areas. It provided insights into leveraging advanced geospatial technologies to enhance the management and conservation of coastal and marine environments. For diversity and inclusion, the training was delivered in French and English.
Global	Australia	CEOS Land Surface Imaging ARD	The CEOS LSI group were interested in hearing from Digital Earth Africa as a user and distributor of CEOS ARD. The presentation emphasised the importance of ARD and outlined some future directions, including the use of Sentinel-3 and Sentinel-5P.
Global	China	Geo Symposium	DE Africa presented in various sessions namely weather and disasters - highlighting DE Africa coastline service in unlocking coastal management, Space based Data Advancement on Data Providers - DE Africa highlighting that its a platform for public good empowering countries in climate action and Ecosystem - Biodiversity and Carbon Management. Key takeaways included DE Africa positioned as a key enabling in empowering SDG reporting, co-development of services with implementing partners, and alignment of key partners in driving earth observation for decision making.
West Africa	Gambia	The Research and Transfer Centre	DE Africa was invited to present at The "Symposium on Climate Change and Land Use and Land Management in Africa organised by the Research and Transfer Centre "Sustainable Development and Climate Change Management of the Hamburg University of Applied Sciences (Germany), the University of The Gambia, and the WASCAL Competence Centre, based in Burkina Faso. DE Africa provided a presentation on the use of earth observation to support sustainable development with examples of land degradation, water observation from space informing drought etc.
Global	Global - online	IGARSS	Papers on the application of Analysis Ready Data (ARD) in Digital Earth Africa and the development of the Waterbodies service were accepted for presentation at IGARSS.

Participation in Conferences, Dialogues and other

Region	Country	Organisation	Details of Participation
Global	Global - online	Global Partnership for Sustainable Development and Development Gateway: an IREX Venture (DG)	DE Africa was invited to AI Dialogue series on Exploring cross-sectoral AI applications and risks in sustainable development on the first dialogue series for the intersection of climate, agriculture and health . DE Africa was observed to be translating earth observation for insights that support sustainable development. DE Africa presented on how it uses earth observation to provide insights that support sustainable development including co-developed of continental services , which are fit for purpose such as the crop land service.
Global	Global Online	The Partnership in Statistics for Development in the 21st Century [Paris 21]	The objective of DE Africa 's engagement was to support to National Statistics Offices (NSOs) in Africa and to provide Earth Observation training to Statistical Offices . PARIS 21 countries in Africa: Ghana, Lesotho, Kenya, Rwanda, Togo, Bénin, Ivory Coast, Malawi.
Off Continent	Madagascar	Nairobi Convention Conference	DE Africa participated at the Nairobi Convention Conference of Party (COP 11) in Antananarivo, Madagascar. DE Africa positioned its coastline service as key for monitoring the Marine and Coastal Ecosystems for the member states and updating coastal management plans and will engage with the Ministry of Environment in Madagascar as a champion country and alignment with DE Africa strategic priority of empowering country action.
East Africa	Rwanda	GEOSAR-University of Rwanda	DE Africa presented to former leaders of the GEOSAR Association and some mentees from the University of Rwanda staff A total of 45 participants on the topic of for Environmental and urban planning
West Africa	Senegal	GEO-LDN	GEO-LDN Francophone Regional Forum were we collaborated with Lissong Diop from CSE to prepare a presentation on the capabilities of DE Africa platforms for GEO-LDN
Global	USA	Esri User Conference USA	Mpho Sadiki attended the 2024 Esri User Conference in San Diego, California, USA. She represented DE Africa and presented on the capabilities of DE Africa platforms at the Imagery Summit. As a Collaborating Partner with ESRI her registration cost was sponsored by ESRI.



**Progress Against
Workplan Activities
per Outcome Area**

Progress Against Targets - Sustainment

RAG STATUS

* not planned for delivery in the relevant Quarter, or

* a recommendation to be removed from the Workplan for 2024

N/A

* **annual target** has been met for the Year

1

100%

* **target** has been met for the Quarter

1

50%

* **target** has begun over the quarter; substantial progress has been made and sufficient mitigation actions have been put in place for target to be met in the next quarter

1

25%

* **target** has not been met in the quarter, little progress has been made or has not started, Mitigation actions have been put in place for target to be met in the next quarter

0

0%

1.1 Governance and Program Delivery

Continued stakeholder confidence in DE Africa's governance, operations and transparency.

4 Quarterly GB/IAB Meetings held

1

25%

4 Quarterly TAC/AC Meetings held

1

25%

4 Quarterly Risk Review Meetings

1

25%

SOPs developed/updated

3

50%

5 IP Work Plans developed, signed

3

60%

12 Monthly reports submitted

6

50%

4 Quarterly Reports uploaded on website

0

0%

2 Annual Reports uploaded on website

0

0%

2 New Work Plans endorsed

1

50%

1.2 Enabling partnerships

African governments and regional institutions are actively supportive of DE Africa pursuing financial sustainment.

3 active collaborations established with partners

+5

50%

3 Joint activities completed

1

33%

Demonstrated use of DE Africa services in 3 opportunity countries

50%

3 learning institutions enabled to, and leveraging DE Africa to support their academic curriculums

2

50%

1.4 Technologies and science

The DE Africa science and technical platform continues as a living, robust, operational and world leading capability that is responsive to Africa's requirements.

1

100% endorsed

1

33% launched

National wetland workflow implemented in 3

3

100%

2 new datasets added to DE Africa platform

3

100%

2

29% developed

1

100%

99% Platform up time

>99%

100%

Progress Against Targets - Uptake and Impact

2.1 User needs/in-country engagement

Tailoring of DE Africa continental services to address specific in-country needs.



20 organisations identified which are interested in leveraging DE Africa climate



4 Use cases from end user demonstrating use



8 Academic institutions engaged with to map



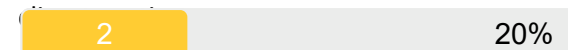
6 Country-level climate assessment completed



2 African countries identified for DE Africa



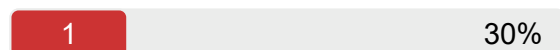
10+ possible locally led use cases identified supporting African led decision making on



2.2 Capacity development

Further development of training and capacity building materials and methods.

Capacity Development Strategy Update



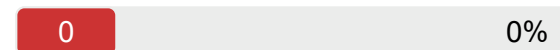
3 new training courses developed for DE Africa Coastlines, Waterbodies, and Wetlands



1 new F2F training course developed that supports the EO Capacity program and Climate Action Toolkit



3 Existing training materials uplifted



2 Opportunity countries Face-to-face training



4 Reports on training events



500 new participants in online or F2F training



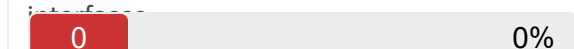
10 users completing training courses from marginalised groups



2.3 User engagement/ uptake

Rapid growth in uptake of DE Africa services including the Map and the Sandbox, and direct use of DE Africa services (e.g., coastline and WoFS).

1 Diverse user needs (Portuguese) on training interface



500 new users through partner interfaces



8 500+ users on the DE Africa platform



2 000+ users on the DE Africa platform



5 established private sector partners identified and engaged



90% of Helpdesk queries are resolved within 72



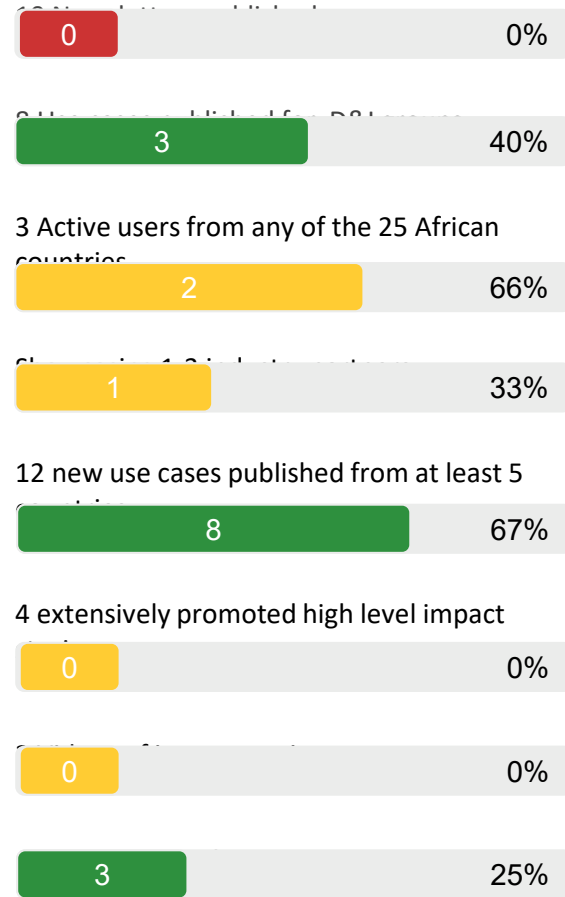
48 Live Sessions held to promote climate action products and services



Progress Against Targets - Uptake and Impact

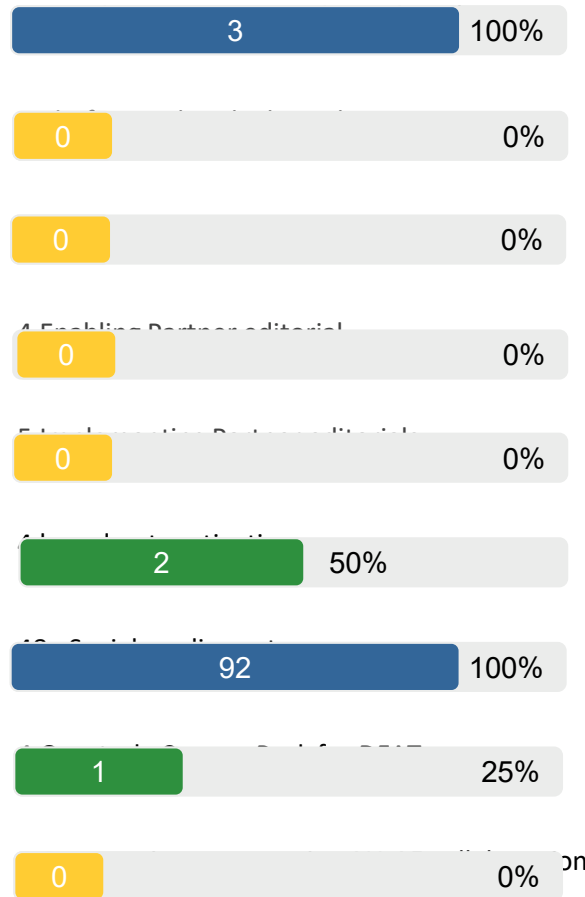
2.4 Demonstrating impact

A growing number of diverse use-cases, successful engagement with decision-makers and African governments.



2.4 Demonstrating impact continued

A growing number of diverse use-cases, successful engagement with decision-makers and African governments.

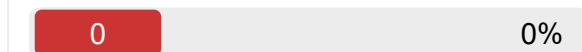


Cross-Cutting

2 DFAT Briefing sessions



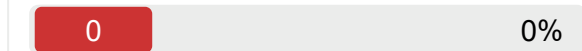
x Translation of reports to French



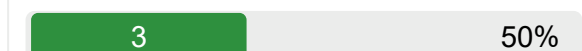
Number of website uploads



5 Strategies updated/developed (Partnerships, Communications, Diversity and Inclusion, Capacity Development, Monitoring, MEL)



Number of targeted D&I initiatives delivered



3 Collaborative Working Group meetings held



Risks, Issues or Challenges

Outcome 1.1 - Governance and Program Delivery

- The only low risk identified in Q1 still remains a low risk which pertains to the Governing Board recruitment process. The new timeline for the recruitment of the Interim Advisory Board aims to be completed by end November 2024.
- Another low-risk relates to the rotation of the TAC Co-chairs, whose terms have long expired. To uphold good governance practices, it is essential to finalise the rotation of members promptly. The process is intended to begin in Quarter 3.

Outcome 1.2 - Enabling Partnerships

- The outstanding work plans for both AGRHYMET and OSS pose a risk to DE Africa given the frustration of the implementing partners in the length of time taken to complete these processes, and the constant back and forth. This is related to a challenge of miscommunication where alignment in meetings is attained but the discussed amendments to work plans are not carried out. To address this challenge in the short term the Contract Manager has met with both OSS and AGRHYMET, and there are plans under development to visit each implementing partner during the course of Quarter 3.

Outcome 1.4 A - Science

- The science team continues to work closely with the platform team to ensure data pipelines are operational. Pipeline gaps and duplications for Sentinel-2 and Landsat-9 have meant that derivative products have been delayed, though this is being resolved.

Outcome 1.4 B - Technologies

- Repeated and frequent restarts on the DE Africa Explorer means there is considerable downtime for short periods at high frequency. This has been somewhat remedied though not overcome. It is also an issue that has been experienced by DE Australia and DE Africa has been in contact to discuss progress. The Platform Lead position has been vacant for over 12 months, which has limited the performance of the platform team. This has been mitigated by contributions from Geoscience Australia and Kartoza staff, though effective recruitment and team structuring remains a priority.

Risks, Issues or Challenges

Outcome 2.2 - Capacity Development and User Engagement

- The delay in implementing the revised Capacity Development Strategy may pose a challenge as we continue to rely on strategies that were developed in Phase 1 of DE Africa program. With a decline in key user training metrics compared to previous years, timely integration of these insights is important to enhance the impact of our initiatives.

Outcome 2.3 - User Engagement/Uptake

- The planned Q3 review of the help desk is important, as current engagement levels are relatively low (around six requests per month), with many users opting for direct communication through emails and private messaging apps. A delay in this review may affect our ability to fully evaluate the help desk's effectiveness, identify gaps in user support, and optimize engagement channels. The review will include integration of Zoho whatsapp into the help desk.

Outcome 2.4 - Demonstrating Impact

- The delays in video development, content production, and the website refresh pose a risk of reducing DE Africa's ability to showcase its impact to key stakeholders as effectively as planned. Delays in these areas may impact how the program communicates its achievements, potentially affecting stakeholder engagement and support. Although the extended timelines might increase the workload as targets shift, the incoming communications support is expected to help manage this, ensuring timely content production and helping to realign project timelines to avoid further delays.

Recommendations to adjust to Quarter 3 Targets

Outcome 1.1 Governance and Program Delivery

There are two adjustments

1. Outcome 1.1 - Line 22

As part of the previous hosting arrangement, DE Africa was required to develop a “*Risk Appetite Statement and a Business Continuity Plan*” to meet their stringent organisational requirements. Consequently, these activities were included in the 2024 Annual Workplan. However, after discussions with the new hosting organisation, it was determined that, given the size and nature of the programme, these specific steps in the Risk Framework are not necessary. **Therefore, this activity will be removed from the 2024 workplan.**

1. Outcome 1.1 - Line 37

It was identified that this target “*Review and Capture stats from Science and Platform targets for D&I inputs*” is a duplication of line 36 “*D&I Initiatives identified across all functional areas of the programme (Partners, IP workplans, Science, Platform, Cap Dev, User Engagement and Comms) and reported against*” and **therefore this target will be removed and reported under line 36.**

Outcome 2.2 Capacity Development

There are four adjustments for Quarter 3

1. Outcome 2.2 Line 9 - Target for Q3 and Q4 adjusted

Cap Dev Strategy was **rolled over** from Q1 to Q2, in Q2 the baseline review was conducted for online courses and virtual interviews with key persons (academia, private sector). The subsequent quarters have therefore been updated as follows; Draft 1 will be finalised in October 2024 to be shared with TAC for review. In Q4 we expect the Phase III cap dev strategy completed and endorsed and implemented in Q4.

Recommendations to adjust Quarter 3 Activities

Outcome 2.2 Capacity Development

2. Outcome 2.2 - Line 11 - Target for Q3 adjusted
The activity “Statistics of existing online courses assessed and inform design of new courses” The quantitative stats are updated monthly - as per portfolio evidence, however it was felt that an additional target was required to inform the design of new course material, therefore the in **Q3 target was adjusted to add** in the development of a survey to evaluate qualitative information to inform the design of new material
3. Outcome 2.2 - Line 13 - Target for Q3 & Q4 adjusted
The activity “Uplift of existing online training material”, this target was scheduled for completion in Q2, however due to extensive internal consultations the Scope of Work drafting was started but not finalised in Q2, therefore the **Q3 target has been updated** to identify and procure the services of a Service Provider for the upliftment of material with the completion/ upliftment of all six (6) training materials undertaken in Q4
4. Outcome 2.2 - Line 16 - Target for Q3 & Q4 removed
It was identified that the target set for Q3 and Q4 for Comms to provide Comms support to F2F training workshops, these targets were incorrectly captured under this section - **this is a duplication** - the Comms support provided for the workshops will be as per O 2.4 activities and therefore these will be **removed as a duplication**.

Outcome 2.3 User Engagement/ Uptake

1. Outcome 2.3 - Line 12 - Target for Q3 & Q4 updated
The Monthly reporting on Sandbox Users target for the year is captured as *2000, however the quarter targets were incorrectly captured as *700 new Sandbox Users per quarter, which is an incorrect calculation. **The Q3 and Q4 target has therefore been adjusted** to *500 Sandbox Users which then calculates to the total of *2000 for the year.

Outcome 2.4 Demonstrating Impact

There are seven adjustments for Quarter 3

1. Outcome 2.4 - Line 18 - Target for Q3 adjusted
Video development of 1 use case, the planning was started in Q2 and the video will be developed in Q3, therefore the **Q3 target has been adjusted** to accommodate the roll-over of the activity.

Recommendations to adjust Quarter 3 Activities

Outcome 2.4 Demonstrating Impact

2. Outcome 2.4 - Line 22 - Target for Q3 adjusted
Article developed and disseminated in Q1. Brochure content has been further collated in Q3. Video development to be investigated mirroring Coastlines video, in Q3.
3. Outcome 2.4 - Line 23 - Target for Q3 adjusted
2 x platform-related articles, the target was not met in the quarter, therefore it will be **rolled-over** to complete one article in Q3 and one in Q4. The article will look at the provision of data in open data cube over traditional methods of providing data; including the usability and accessibility of satellite data for Africa.
4. Outcome 2.4 - Line 26 - Target for Q3 adjusted
2 x Media Piece developed by Implementing Partner. Due to a focus on annual conference by RCMRD team combined with fieldwork, there has been a slight delay in meeting to discuss article ideas. However following a meeting in late Q2 this will be progressed. This means that there will now be **3 implementing partner articles** that will be developed for Q3.
5. Outcome 2.4 - Line 29 - Target for Q3 adjusted
Currently first emailer content is being collated for distribution in October. It will be important to ensure that a process is established for incorporating new contacts into the database that will be hosted on Mailchimp.
6. Outcome 2.4 - Line 31 - Target for Q3 adjusted
Website Upgrade/Refresh and continuous maintenance. There is continuous maintenance, however the refresh will occur in Q3. The website audit and navigation recommendations are in hand. The terms of reference for web development are currently being written and will be sent to three identified service providers in the next few days. The aim is to have costings provided from service providers by the week ending 11 October. Upon selection, immediate hosting of the current website can be taken over while the refresh is underway.
7. Outcome 2.4 - Line 33 - Target for Q3 removed
The target to investigate and implement Instagram as an additional social media platform. The investigation was undertaken and following internal discussions the recommendation is to no longer progress Instagram due to available resources and the target market, which is not as focused as X and LinkedIn. Resourcing; target market. This target for Q3 and Q4 has therefore been removed

Financial Summary for Quarter 2

Total expenses - R3 571 828

Implementation costs

- Total staff travel costs - R112 845
- Total sponsorship costs - R60 000
- Workplan implementation costs - R52 827
- Contractor costs - R33 750

Operational costs

- Total DE Africa staff salary cost - R1 658 878
- Total interim host support costs - R1 275 529
- Total host operating costs - R378 000

Total income - R7 961 293

	July	August	September	Total for Q2
Total Income	R1,959,345	R0	R6,001,948	R7,961,293
Rolled -over funds	-R413,991	R359,626	-R950,738	--R413,991
Total income	R1,545,354	R359,626	R5,051,209	R7,547,302
Travel costs	R46,630	R66,215	R0	R112,845
Sponsorship cost (<i>Hackathon D&I initiatives</i>)	R0	R60,000	R0	R60,000
Other Workplan implementation costs	R0	R52,827	R0	R52,827
Contractor Costs	R0	R0	R33,750	R33,750
DE Africa Staff salaries	R555,893	R548,116	R554,868	R1,658,878
Interim host support costs	R457,206	R457,206	R361,118	R1,275,529
Host operating costs	R126,000	R126,000	R126,000	R378,000
Total expenses	R1,185,728	R1,310,364	R1,075,736	R3,571,828
Balance as at 30 September 2024	R359,626	-R950,738	R3,975,473	R3,975,473

Acknowledgements





Digital Earth
AFRICA

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