An all-Inclusive capacity development programme for a sustainable future

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Abstract

There is no doubt anymore that Earth Observation (EO) is contributing toward meeting the Sustainable Development Goals and addressing environmental challenges. Digital Earth Africa's objective is to make freely available an EO data cube for all of Africa that democratizes the capacity to process and analyse satellite data. It allows to track changes across Africa in unprecedented detail and will provide data on a vast number of issues, including soil and coastal erosion, agriculture, forest and desert development, water quality, and changes to human settlements. To realise full benefits of an advanced Platform like Digital Earth Africa, Digital Earth Africa has co-designed and co-developed with five institutions namely the Regional Centre For Mapping Of Resources For Development (RCMRD, Kenya), Centre de Suivi Écologique (Senegal), l'observatoire du Sahara et du Sahel (Tunisia), AFRIGIST (Nigeria) and AGRHYMET (Niger). This was meant to ensure it meets end-users needs, this program has been developed by the future deliverers of the program. From the trainers' perspective, the program is built to consider the recent changes in teaching approaches and methodologies including pedagogy that emerged from a Covid-19, and post Covid-19, pandemic world. On the end-user side, the curriculum covered a wide spectrum of topics, from understanding satellite images, python scripting in the JupyterLab environment to identifying solutions to SDGs challenges through use cases, available in English and French. Digital Earth Africa's Gender Equity, Diversity and Social Inclusion principles strategy (GEDSI) is imprinted as a watermark across the whole program. It prioritises gender equality, diversity, and social inclusion so that women, people with disabilities and marginalised individuals and communities have the same opportunities to benefit from EO data. In addition, Digital Earth Africa started live virtual sessions, to stay connected with end users, who have developed impactive stories in their communities. Digital Earth Africa seeks to support the capacity development of individuals, academic and governmental institutions, and private sector organisations to empower present and next generation of decision makers to drive toward a sustainable future, leaving on one and place behind.

An all-Inclusive capacity development programme for a sustainable future

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Introduction

Earth Observation (EO) is contributing toward meeting the Sustainable Development Goals and addressing environmental challenges.

Digital Earth Africa's (DE Africa) objective is to make freely available an EO data cube for all of Africa that democratises the capacity to process and analyse satellite data. It allows us to track changes across Africa in unprecedented detail, and provides data on a vast number of issues, including soil and coastal erosion, agriculture, forest and desert development, water quality, and changes to human settlements.

DE Africa is working to strengthen African institutions to collaborate and work together to better understand, access and use DE Africa.

Earth Observations

To ensure it meets end-users needs, Digital Earth Africa co-developed with institutions in Africa an all inclusive learning program and associated platform. This program is developed by partners in Africa namely, the Regional Centre For Mapping Of Resources For Development (RCMRD, Kenya), Centre de Suivi Écologique (CSE, Senegal), l'observatoire du Sahara et du Sahel (OSS, Tunisia), AfriGIST(Nigeria) and AGRHYMET (Niger) and South African National Space Agency (SANSA).

- Online self-guided courses introducing the platform
- Training of the Trainer (ToT) for advanced users who can train others
- An end-user training, covering tips such as EO datasets, platform and interfaces, Python scripting, building use cases for SDGS and others..
- Digital Earth Africa's Gender Equity, Diversity and Social Inclusion principles strategy (GEDSI) is imprinted as a watermark across the whole program.

Results

Table of modules
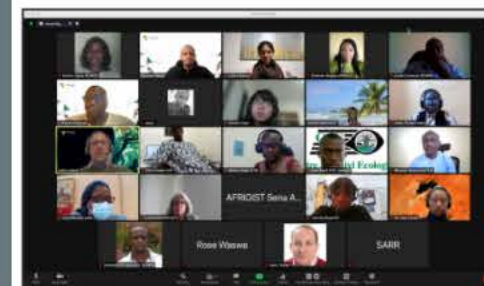
M1. Introduction to EO

M2. DE Africa Architecture and Features

M3. Desktop Analysis with DE Africa

M4. Python and Interactive Data Analysis

M5. DE Africa Platform API

M6. Hands-on DE Africa Case Studies

Capacity Development Lead Kenneth Mubea, PhD

Technical Manager Edward Boamah

A Zoom seminar conducted by Digital Earth Africa training specialists.

Co-development of learning modules

The consultation process during the establishment of the implementation plan made clear the need to support the development of different skills and knowledge. In addition to the empowering of future deliverers, the co-development phase led to the creation of the six following modules and are made available through a Open Learning platform https://learn.digitalearthafrica.org/

With this program, Digital Earth Africa seeks to support the capacity development of individuals, academic and governmental institutions and private sector organisations to empower present and next generation of decision makers to drive toward a sustainable future.
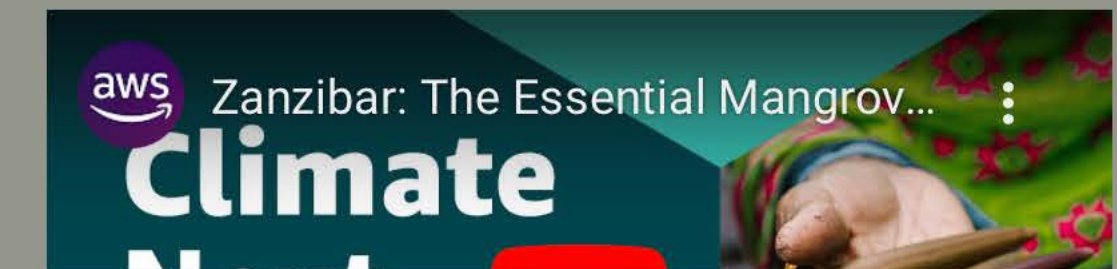
Collaborators, stakeholders, users

- Decision makers:
- Users: anyone
- Beneficiaries: everyone
- Special audiences: no one is left behind

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Conclusions/Expected Outcomes

Digital Earth Africa (DE Africa) is empowering countries on climate action using the co-developed fit for purpose training and help meet Africa's development needs of all stakeholders from government, academia, and civil society organisations.

Zanzibar: The Essential Mangrov...

Climate Next

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Connect with DE Africa

Weekly Live Sessions

Join the DE Africa community every Wednesday 11am (GMT)

https://zoom.us/j/5890793425

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