Digital Earth
AFRICA

Careers In African Space

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Careers In African Space

Digital Earth AFRICA

- Scientists: astronomy, physics, life sciences
- Engineers: aerospace, electronics, mechanical, ***geomatics/geospatial***
- Technicians: aerospace, avionics
- Media and Communication

Geospatial Engineering: include the fields of mapping, surveying, ***remote sensing*** (LiDAR or HDS scanning), hydrography, photogrammetry, global positioning systems (GPS), and geographic information systems (GIS).

Opportunities: GIS/Remote sensing experts, navigation (GPS/GNSS), surveyors, researchers (universities, NGO's)

Geospatial Engineering

- Employers: government, academia, private sectors, NGO's.
- Role: contribute to agriculture, water, urbanisation, forest management

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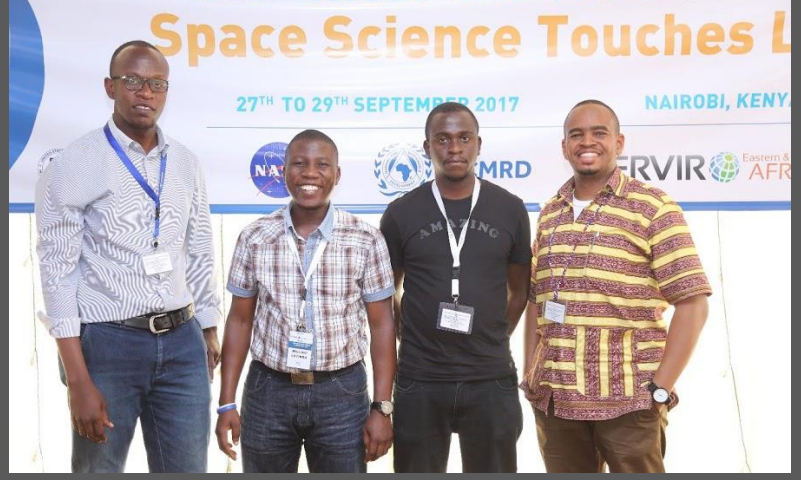


Digital Earth AFRICA

Developments – GIS

- Role of technology
- More academic institutions in Africa
- Scholarship and exchange programs e.g. DAAD,
- Projects: GMES in Africa, SERVIR (NASA-USAID), Digital Earth Africa,

Highlights:

- Partnerships: Governments, academia, NGO’s
- Network and outreach
- Sharing: data, experiences
- Leave no one behind

Digital Earth Africa (DE Africa)

- Make earth observation data more easily accessible
- Develop in-country capacity: online training
  https://training.digitalearthafrica.org/ [English, French]
- Broad applications including agriculture, water, urbanisation, forest

DE Africa will seek to be an **exemplar of diversity and inclusiveness**. The governance framework will be mindful particularly of gender and geographic diversity in its makeup at all levels.

https://www.digitalearthafrica.org/

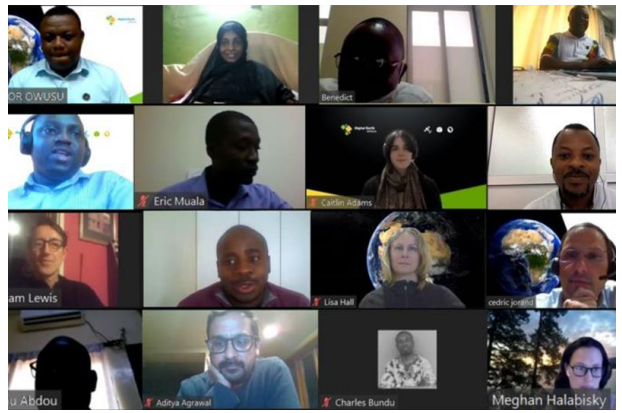
DE Africa Training

- DE Africa 6-week training program https://training.digitalearthafrica.org/
- Self-paced online course: includes videos, recorded tutorials and manuals with hands-on exercises.
- Certificate of completion is awarded upon completion of exercises
- DE Africa weekly sessions: every Wednesday at 11am (GMT zero) https://us04web.zoom.us/j/5890793425

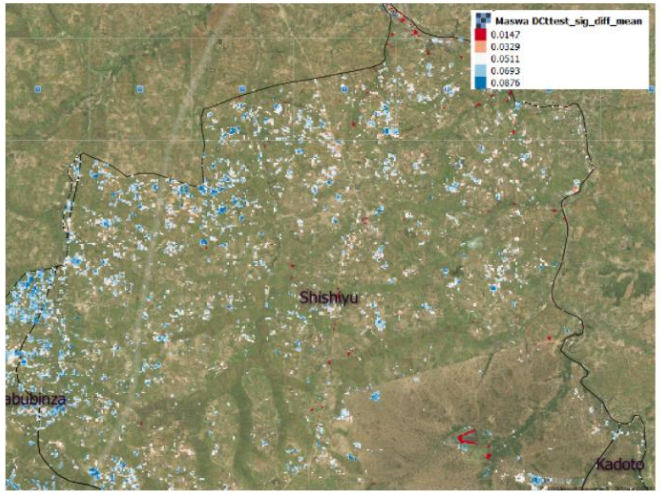
E-mail training@digitalearthafrica.org.

Lessons

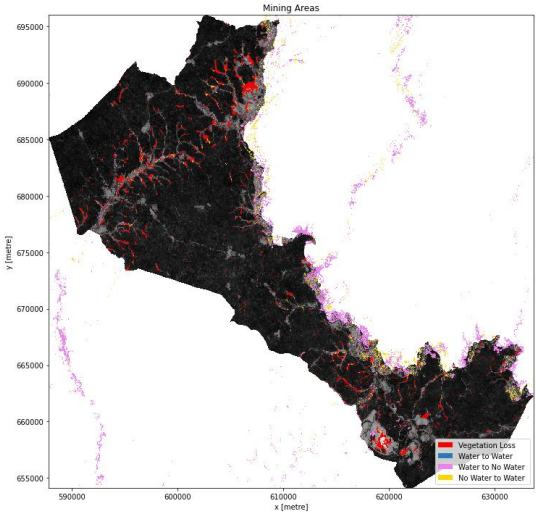
- Session 1: Introduction
- Session 2: Datasets
- Session 3: Composites
- Session 4: Indices
- Session 5: Vegetation Analyses
- Session 6: Water Analyses
- Course conclusion & wrap-up



DE Africa Engagement with users to co-develop user cases

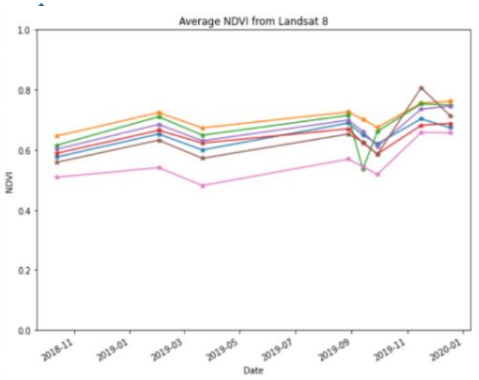


*Vegetation changes, NBS Tanzania, co-development, Published **with measurable impact***

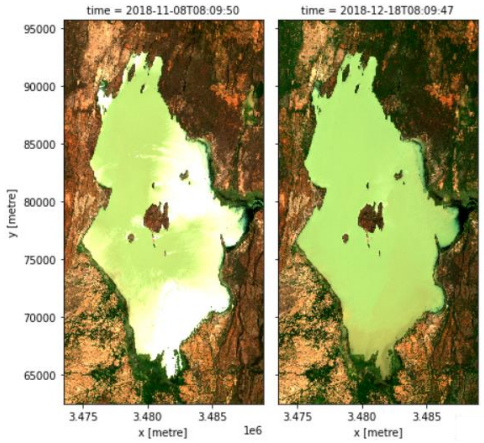


Illegal mining in Ghana

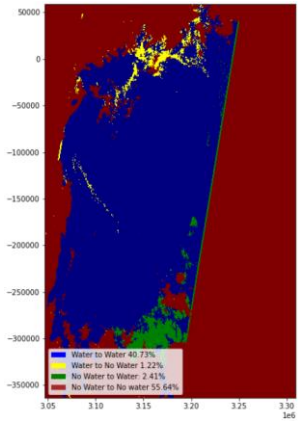
Leaflet | Tiles © Esri — Source: Esri, i-cubed, USDA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGN, IGP, UPR-EGP, and the GIS User Community



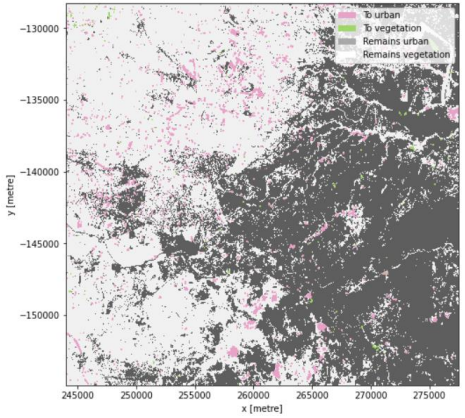
Assessment of coffee farming in Muranga, Kenya



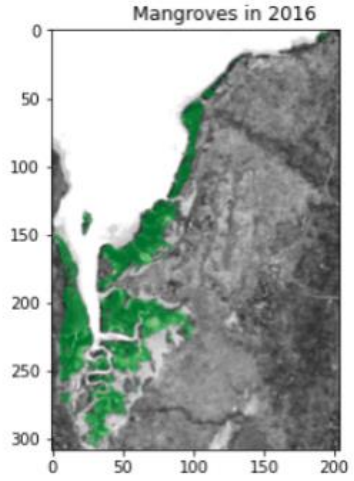
Water quality, Lake Baringo



Water extent Lake Victoria



Urbanisation, Nairobi



	2014	2015	2016	2017	2018	2019	2020
All Mangrove Count	7273	7274	7244	7239	7237	7238	7229
Closed Mangrove Count	5028	4872	4869	4867	4905	4912	4908

Mangrove extent in Makoba Bay, Zanzibar

*Time series for nature: Preserving mangroves in Zanzibar **published on DE Africa website***

DE Africa use cases

Benedict Mugambi, Tanzania National Bureau of Statistics (NBS), engages with the Regional Commissioner for Simiyu region, Hon Antony John Mtaka

#FarmingbySatellite

They offer farmers the opportunity to assess differences in agriculture fields over time and location, as well as vegetation phenology such as planting and harvesting: GeoM&E!

DE Africa use cases: agriculture, water, urbanisation, mangroves, forest

https://www.digitalearthafrica.org/media-center/blog

GitHub wiki: github.com/digitalearthafrica/deafrica-sandbox-notebooks

Slack: opendatacube.slack.com/

THANK YOU

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