

African Regional Data Cube (ARDC) Workshop

Agenda (version 0.2)

May 9-11, 2018

Strathmore University

Nairobi, Kenya

Objectives: The African Regional Data Cube (ARDC) Workshop is intended to introduce the Open Data Cube (ODC) to local users and provide hands-on training on the management of the data and approaches for applying application algorithms to produce relevant products for decision-making. The workshop is intended to be "invitation only" in order to maintain a focus on the ARDC and to achieve an operational condition at the end of the 3 days of training.

Attendees: Invitations will be given to representatives (e.g. National Statistics, Ministries of Environment or Agriculture, geospatial researchers or scientists) from the five ARDC countries (Senegal, Sierra Leone, Ghana, Kenya, Tanzania), Strathmore University (meeting host and ARDC data manager), GPSDD (ARDC initiator), Amazon (data storage and processing donor), U.K. Rhea (leading a similar effort for Uganda), U.K. Catapult (ODC Partner), SERVIR (manages a hub at RCMRD), Radiant Earth (interest in capacity building for agriculture), and the CEOS Systems Engineering Office (implementation and training lead).

Non-technical attendees should have control of resources that might be applied to ARDC countries for capacity building or data management. These attendees will observe the training and be part of strategic discussions. Technical attendees should have a good knowledge of geospatial satellite data with an interest in learning how to use the data cube for the generation of application products or the management of such data. Python code experience is not required, but is desired. Technical attendees should bring a laptop computer (or use one from Strathmore) with internet access and an installed GIS tool (e.g. QGIS or ArcGIS).

Overall Plan: Day 1 will be focused on stakeholder introductions, goals and objectives of the ARDC, and presentations by country representatives on their desired application needs and products. Day 2 and Day 3 will be focused on "hands on" training where the users are split into country-level groups and given tasks. Each group would be using the data from their country cube to develop application products. They will use the online user interface and also use Python notebooks.

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Wednesday, May 9

8:30	Registration	
9:00	Opening Remarks / Logistics / Goals	Strathmore University
10:00	ARDC Vision	GPSDD
10:30	Open Data Cube: Background	CEOS SEO
11:00	Break	
11:30	Open Data Cube: ARDC Plans	CEOS SEO
12:00	Uganda IPP Project <i>An International Partnership Program (IPP) project supporting drought and flood mitigation using the Open Data Cube</i>	U.K. Rhea
12:30	Lunch	
2:00	Kenya	
2:30	Ghana	
3:00	Senegal	
3:30	Break	
4:00	Tanzania	
4:30	Sierra Leone	
5:00	Adjourn	
6:30	Dinner / Social	

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Thursday, May 10

9:00	Data Cube Applications (summary)	CEOS SEO
10:00	DEMO - Online User Interface	CEOS SEO
11:00	Break	
11:30	DEMO - Jupyter Python Notebooks	CEOS SEO
12:30	Lunch	

Training Module #1 (AWS Online User Interface)

The CEOS Systems Engineering Office (SEO) team will be available during the training period to answer questions and provide guidance

(2:00 to 3:30) Cloud-free Mosaics

Each country group will generate a Landsat cloud-free mosaic in an area of interest in their country using several methods (median, most recent pixel, geomedian) and compare the results in the user interface (UI) and in a GIS tool (e.g. QGIS). Mosaics should be long-term (annual) and short-term (seasonal). Users can also explore false-color RGB images, time-series animations and evaluate cloud issues in resulting mosaic products.

(3:30 to 5:00) Water Extent and Water Quality

