

#### WATER-FORCE

# FUNDAMENTAL LAWS FOR WATER RESOURCES MANAGEMENT IN AFRICA USING COPERNICUS EO DATA

Ruvimbo Samanga



## RoadMap

#### Issues to Tackle

- 1. Identify User Communities
- 2. Copernicus WATER Services for Policy Development, Monitoring
  - & Evaluation
- 3. Gap Analysis



#### Geo-characteristics-AFRICA

## AFRICA IS THE SECOND-DRIEST CONTINENT IN THE WORLD.

WITH ONLY 15% OF THE GLOBAL POPULATION, IT HAS ONLY 9% OF GLOBAL RENEWABLE WATER RESOURCES.



## User Communities

### Water as critical to African livelihoods

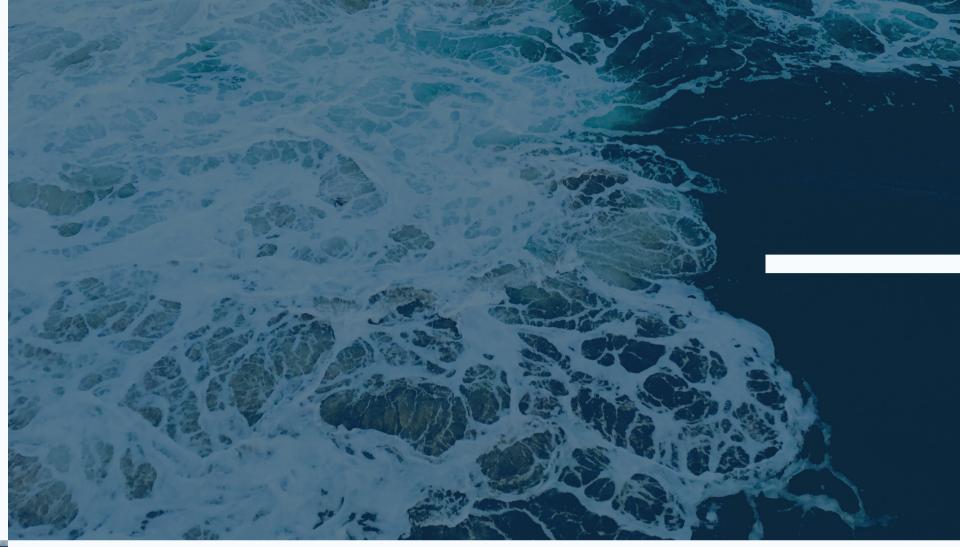
- 40% of Africa's population lives in arid, semi-arid and dry sub-humid areas.
- 60% live in rural areas and depend mainly on rain-fed agriculture.
- Less than 5% of Africa's surface and groundwater harnessed for use.



#### **GMES & Africa Consortia**

Consortia have highlighted needs for river navigation, flood-focusing systems, water quality particularly for agricultural systems as well as oceanographic variables.





How can space contribute to water resource management, hydrology, or any water related field?

Earth Observation Policy



## Gap Analysis

- National Spatial Data Infrastructure (NSDI)
- Drought management plan
- Water Management Epertise;
- Institutional mechanisms for joint development commissions
- Framework for the adoption of national water resources strategy for uniformity and coordination amongst jurisdictions.



## Gap Analysis

## THE AREAS OF IMPORTANCE FOR AFRICA INCLUDE:

The Copernicus programmes water-related products through all its six services (atmosphere, land, marine, climate change, security, emergency).

#### GAP ANALYSIS

- Integrated Water Resource Management While interdisciplinary, does not provide succint policy support
- SADC Draft Regional Policy
  Infrastructure inadequate to meet demand

- The African Water Vision
   Opportunity for space-based applications.
- AfDB Water PolicyUniversal adoption.

### 50%

HOWEVER, ACROSS AFRICA,
WATER IS UNEVENLY
DISTRIBUTED, WITH MORE
THAN 50% OF WATER
RESOURCES
CONCENTRATED IN
CENTRAL AFRICA

3%

LESS THAN 3% IN NORTH AFRICA.

## Social Impact Investment

## Illustrative Example: of Water Rights in Africa

The Sustainable Development Goal (6) of providing everyone with safe and reliable drinking water services combines a moral imperative with an entrepreneurial opportunity.

