

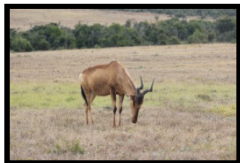
## Implementation plan to be presented next....



Marine and Coastal Areas



Water Resources Management



**Management of Natural Resources**

## NRM: Background/needs

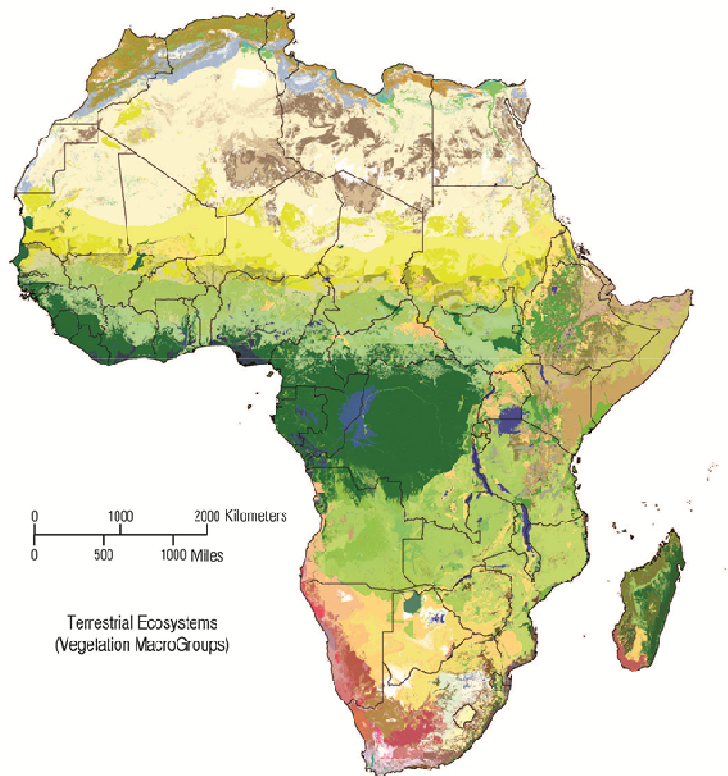


Figure 1:  
Terrestrial ecosystems of Africa. Source and Legend: Sayre et al., 2013.

- 90% of Africans depend on natural resources (incl. mineral res.)
- Ecosystems very fragile: fire, overgrazing, unsustainable management, conflict, etc.
- Monitoring requirements across borders...

## **NRM: Needs at 3 scales**

- Local: Long-term monitoring to identify pressures on local NR and to design appropriate management responses.
- Regional: Regional reference systems to assess and characterize state of NR and the environment (baselines....).
- Continental: Assessment and forecasting capacity of environmental phenomena and early warning systems.

## **NRM: Existing initiatives**

- Esp. in NRM sector many on-going initiatives, programmes, projects at all scales and in collaboration with various national and international partners:
  - Africover
  - Agricab
  - AMESD/MESA
  - AMMP
  - BIOPAMA
  - FAO Global Forest Resource Assessment
  - Globcover
  - ...

## NRM: Gaps

...But:

- Current efforts fragmented.
- Lacking a use-friendly interface and DSS capacity.
- Maps are incomplete, don't cover the entire continent or lack sufficient accuracy.
- Consolidated spatial data for NRNRM (exploitation, abandonment, post-mine closing) are lacking.
- Acquisition and processing infrastructure/capacity unevenly distributed across Africa.



## **NRM: *GMES and Africa* NRM Service**

- Pan-African and utilizing EO data from space agencies;
- Comprehensive such that end-to-end services are provided with value-added products;
- Build on existing (research) programmes (e.g. to ensure incorporation of their achievements);
- Maintained and operated by Africans (through further strengthening of African capacity in various African centres of excellence);
- Linked with national, regional and continental governance schemes and ensure effective consultation with all stakeholders involved;
- Equipped with sufficient and continuous funding to achieve sustainable operation of the service.

## **NRM: *GMES and Africa* Products (1)**

### **Land Cover & LCC maps for Africa:**

- Standardised format/different scales and complementing on-going initiatives.
- Regular LCC characterization at coarse resolution (3 yrs).
- Baseline at medium resolution (5-10 yrs or more frequent if required).
- National/local estimates are finer resolution.
- Improved models for automatic LCC assessments.
- EO products to support ecosystem services assessment.

## **NRM: *GMES and Africa* Products (2)**

### **DSS for long-term NRM strategies in Africa:**

- Aimed at African NR managers, land-use planners and decision takers.
- Integrated approach (satellite, in-situ).
- Generic model consolidating data from various projects and providing friendly user interface.
- Surveillance of changes in protected areas.
- GIS-based system for biodiversity monitoring and habitat management (habitat maps, LC/LCC maps, environmental gradients, disturbance assessment, resource zonation etc.)



## **NRM: Main stakeholders and Users**

- National authorities, technical experts, regional planning commissions, policy makers, commercial enterprises and other stakeholders primarily in the environment, forestry and mining sectors.
- Many of the proposed products also address needs of other sectors. In particular many of them may cover the needs of:
  - Agricultural agencies;
  - Water resource agencies;
  - Developing agencies (for monitoring and assessment purposes);
  - Weather services;
  - Civil protection agencies;
  - Research community

## **WRM-NRM: Action plan / timeline (1)**

### **Consolidation period** (minimum of 1 year):

- Aimed at fully developing, validating - consolidating an initial set of services based on existing initiatives, projects and programmes in Africa and elsewhere;
- Agreement on placement of *GMES and Africa* services, stakeholder engagement/ ownership and role of AUC, RECs, NSAs.

### **Scaling up period** (3 years):

- Prioritized services should be further developed and scaled up extending the user base together with further development of African capacity to operate and run the selected services;

## **WRM-NRM: Action plan / timeline (2)**

### **Implementation Period (4 years):**

- Services will be implemented and run in an operational manner for the priority services. During this period efforts are also required to put in place additional services which have not received highest priority but are required to complement the needed information for the *GMES and Africa* Services.

## Input acknowledged

- Members of the Scientific Committees
- Participants of the various thematic workshops
- *GMES and Africa* /BRAGMA Coordination Team members
- Individuals from Africa and Europe

# Thank you for your attention!