Africa at Meso-Scale: Adaptative and Integrated Tools and Strategies on Natural Resources Management

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Runtime: 1 March 2011 – 28 Feb 2014

15 partners of which 6 EU, 6 African and 3 international

5 case studies: South Africa, Ethiopia, Uganda, Tunisia, and Mali

Budget: 4.1 mio Euro

Funded by EU 7th Framework program

Coordinated by Antea Group (Belgium)
MAISON

- Landscape = “house” (in French)
- A house where:
  - People live under one roof
  - Have different interests
  - Have different roles/tasks

“AFROMAISON:
Managing a landscape like a household”

MESO-scale

- Bringing INRM into practice at sub-national level
- Work across scales
- Tools & strategies as “building blocks”
- Processes for societal change
AFROMAISON – Case studies

Selection criteria:
- Range of eco-regions
- Multi-functional landscape
- High vulnerability
- Competition for NR
- Strong local partner, having established networks with stakeholders and authorities
- Area: 5,000 km² - 50,000 km²
Natural resource issues

South Africa: High mountain areas well protected, Small scale farming areas, Commercial farming areas, Overexploitation of resources.

Ethiopia: Vulnerability (food, ecosystem), Land degradation caused by deforestation, Mixed crop-livestock system, irrigated and rainfed, Erratic rainfall, Flooding, Erosion, Decline of Soil fertility, Population pressure, Food insecurity, Landlessness.

Mali: 1.6 mio inhabitants, 3m-6m rise in flood waters, “the most dramatic example of climate variability ever measured”, potential rise in temperature, potential decline in river flow, reduction of rain by 20% leads to 60% less flood area, low floods (reduces fish, rice cultivation, bourgou grass), Diversion of inflow water (reduce flood area).
Solutions

- South Africa: Capacity of government and citizens, Reduce cattle stocks, Manage burning of grasslands, Rehabilitate erosion, Improve farming methods, Economic incentives, INRM.

- Ethiopia: Capacity building, Manage landscape to secure water resource, Increase tree cover, Soil conservation, Rainwater harvesting, Tools for integration (e.g., PES), INRM.

- Mali: Capacity building to manage NR, Urgent need to consider the bigger picture, Better prediction of flooding to allow adaptation, Stabilize river banks, New areas for rice & bourgou cultivation, Better grazing patterns for cattle, Improved aquaculture techniques, INRM.
AFROMAISON – Expected impacts

Identify operational requirements for INRM
- At meso-scale (landscape)
- In a changing environment

Operational tools & strategies for adaptation
- Impact pathway for uptake of tools and strategies in operational management
- Evaluations of impacts and sustainability of tools & strategies
- Capacity & ownership building

Better exchange of information
- Spatial Data Infrastructure
- Multi-level participatory platform for supporting change
Strategies for restoration and adaptation, incl.
- For management of land, water and wood
- Sustainable landscape functioning
- Ecosystem services & livelihood

Economic tools and incentives, incl.
- Payments for ecosystem services
- Generation of alternative income sources and employment

Tools for spatial planning, incl.
- Negotiation supports tools (trade-off, impact assessment)
- Strategic Environmental Assessment
- Mapping of landscape functioning & vulnerability
WP1 Project Management
Lead: ANTEA Group; Tom D’Haeyer

WP2 Multi-disciplinary rapid assessment & barriers for effective INRM
Lead: ICRAF; Delia Catacutan

WP3 Tools for restoration & adaptation
Lead: IWMI; Deborah Bossio

WP4 Economic tools & incentives
Lead: INR; Chris Dickens

WP5 Tools for spatial planning
Lead: UNESCO-IHE; Hendrike Helbron

WP6 Global change, vulnerability & scenario design
Lead: PIK; Fred Hattermann

WP7 Operational Framework & Toolbox for adaptive INRM
Lead: CIRAD, Raphaële Ducrot

WP8 Dissemination, capacity building & end-user involvement
Lead: UNIGE/GRID; Gregory Giulani

Crosscutting processes
Lead: Soresma

- Decentralisation & governance
- Norms & traditions
- Local expertise & practices
- Capacity
- Ownership & acceptance
- Access to land, water & wood
- Gender
Bringing OGC web services into practice
- Raising awareness on open standards
- Building capacities for sharing data
- Strengthening of ownership
- End-user information & scientific dissemination

Building a community
- Improving information, data & services exchange in Africa
- Contributing to international efforts (GEOSS, UNSDI, ...)

Building synergies
- With other projects and international platforms (EuroGEOSS, AEGOS, SERVIR-Africa, UNEP-Live, ...)

AFROMAISON - SDI
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- Powered by OpenGeo Suite Community Edition & GeoNetwork
- AfroMaison GeoNetwork
  - http://afromaison.grid.unep.ch/geonetwork
- AfroMaison GeoServer
  - http://afromaison.grid.unep.ch/geoserver
- AfroMaison GeoExplorer
  - http://afromaison.grid.unep.ch/geoexplorer
- AfroMaison GEOSS component

Already 531 layers available for baseline data (Boundaries, Population, LC/LU, DEM, HydroMeteo)
Part of WP8
- For dissemination, capacity building & end-user involvement
- Better exchange of information
- Sharing most relevant data and information using OGC/ISO standards
- Proposed as a task within the GEO Work Plan 2012-2015
- Promote use of open standards and open data policies

For each case study
- Sustain the needs of each CS
- A web-GIS application
- Sharing data and metadata (using WMS, WFS, WCS & CSW)
- Will be one of the many tools available in the AfroMaison toolbox
- Transferred by the end of the project to CS area
How can AfroMaison benefit from EuroGEOSS experience?

One of the main issue we are currently facing is discovering relevant data & services providers for Africa.

Building synergies and improving data exchange in Africa.

Searching across heterogeneous data sources.

Solution: Implement a discovery broker

- Multidisciplinary interoperability
- Brokers heterogeneous cyber-infrastructures
AFROMAISON BROKER

- Resources already available:

WaterML 1.1 accessor
A big THANK to ESSI lab team
Many tools and expertise available, BUT scattered and often not operational

Today

Tomorrow

- Improved integration
- Toolbox & strategies for INRM
- Making use of what is available
AfroMaison – Social medias

Website
- http://www.afromaison.net

Twitter
- @afromaison

LinkedIn
- http://www.linkedin.com/groups/AfroMaison-3865389

YouTube
- http://www.youtube.com/afromaison
AfroMaison – Social medias

In the 2050’s
Thank you for your attention

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