BIODIVERSITY WORKING GROUP

Chair: Abel Ramoelo

Rappartueur: Johanna Niipele

Paolo Roggeri

Martha Biong

Hambani Masheleni

Islam El-Magd

Ana Morgado

André Nonguierma

Christophe Habimana

Lineo Molejare

Joao Lima

Paul Cunningham

John Njogu

INTRODUCTION (GENERAL COMMENTS)

- Defining biodiversity in Africa – in terms of species adaptation, distribution…
- Biodiversity services (definition and benefit sharing/value/ status)
- Elaborate on the importance of conservation and protection of BD
- Challenges in BD management
- Use of biodiversity or biological resources???

POLICY DRIVERS

- MDG vs. BD (how biodiversity could contribute to poverty alleviation – food resources)
- How GMES and Africa can contribute to both CITES and CBD Convention (e.g. monitoring of endangered species).
- RAMSAR – GMES and Africa contribution on the monitoring of wetland ecosystems.
- UNCCD – GMES and Africa contribute on the monitoring of desertification and land cover changes.
- UNFCCC – monitoring the effects of land cover or habitat change.

NEEDS ANALYSIS

- Coupling in-situ- development of bottom up approach on information generation. Allow park managers to collect and update park information.
- Impact of land cover / land use on BD (e.g. agriculture) —GMES and Africa to develop a land cover/ land use monitoring system
- Rehabilitation plan (e.g. Afforestation, etc.) – use RS to monitor extend of impact and progress of Afforestation.
- RS can provide information on illegal activities (information on poaching, overgrazing and wild fire)—development of monitoring systems for overgrazing and wild fires.
- Land use planning - RS can be helpful in providing baseline information on land use.
- Destruction of ecosystems by ice rats? (Mapping extends of vegetation – coupled with in-situ water quality information).

NEEDS ANALYSIS…CONT…

- Identifying impacts (pollutants) on fresh water and marine ecosystem using RS --Use high resolution imagery and lab analysis (e.g. using Sentinel constellation and African resource management constellation (ARMC)).
- Are we only looking at indigenous species or also GM species? Monitoring irrigated agricultural areas of GM.
- Invasive species – species out-competing indigenous species. The cost of eradication and its impacts on the economy. GMES and Africa could provide information on the cover/extend of invasive species.
- How do we use EO to solve problem of habitat defragmentation due to mining and oil exploration activities? (mapping and policy development)
- Migration and population dynamic of different species. monitoring system of migratory species' habitat (e.g. rangeland quality and quantity)

MAPPING EXERCISES

- Institutional capacities in Africa
  - African Botanical and wildlife Institutes and Networks
  - African Space Agencies
  - Institutions responsible for Remote Sensing and Mapping
  - Institutions responsible for Biodiversity Conservation and Management (e.g. Protected Areas - National Parks, RAMSAR Sites, etc.)
  - Universities, Museums, Training Centers focusing on Biodiversity
  - RAPAC-RAPAO and other protected area networks
  - GBIF

MAPPING EXERCISES

- Existing projects and Initiatives
  - Agricab
  - AMESD/MESA
  - BIOPAMA
  - DOPA (Digital Observatory for Protected Areas)
  - ECOFAC
  - GEOBON
  - PARCS DE L'ENTENTE (W)
  - REDD pilots
  - The Maluti-Drakensberg Trans-frontier Project
  - Working for Water Project (South Africa)

MAPPING EXERCISES

- Human capacity
  - Important training component of MESA Programme
  - National universities and training centers

IDENTIFICATION OF GAPS IN EXISTING OR PLANNED FUNDING PROGRAMMES

- Lack of in-situ data—GMES and Africa could support a more systematic approach towards data collection, management and sharing
- Promote the use of electronic (e.g. mobile devices) for local data collection, (e.g. cyber tracker, SMART, Mobile Apps, GPS collars)

BUILDING GMES-AFRICA SERVICE

- EO can support early warning systems (e.g. poaching and illegal exploitation of resources)
- EO based monitoring for vegetation productivity
- EO for monitoring Climate Change and how it affects Biodiversity

RECOMMENDATIONS

- Update former institutional names were appropriate (e.g. Hartebeesthoek / SAC (South Africa) = South African National Space Agency (SANSA))
- Knowledge Repository of Biodiversity related projects – Ongoing in BIOPAMA
- All Natural Resources Management related projects should place a strong emphasis on training (e.g. AMESD/MESA) and local skills capacity building
- EO can contribute to mainstreaming Biodiversity Conservation into National and Regional Policies and Decision Making
- Promote the use of International standards to facilitate National and Regional data management and sharing
- Support specific role of protected areas and ecosystems in land planning process (e.g. mining pressures, oil explorations, agriculture)
- EO supporting industry, research and innovation for Natural Resources Management