

PUMA, AMESD and GMES Africa: promoting the use of Earth Observation for Sustainable development in Africa.

Description

Two activities have been initiated to foster the use of Earth Observation data in Africa: PUMA and AMESD.

PUMA

The Meteosat Second Generation (MSG) has been the catalyst for an exceptional collaboration in Africa: the PUMA Project (also known as the Meteorological Transition in Africa Project). 53 countries in Africa have participated in this 'globalised information society' project to transform meteorological services over the continent. PUMA created a network of 53 African countries and five regional centres in Africa, equipped them with satellite data receiving station infrastructure, assisted them with, technical and thematic training programme and supported application to obtain and use data for a multitude of purposes. Each participating country benefited from:

- equipment to ensure continuous direct reception of the new meteorological and environmental satellite data stream, through GEONETCast;
- software to operate the equipment and derive usable products (such as weather forecasts, estimates of rainfall, real-time observation of fires and measurement of sea surface temperature);
- training for improved use of the data;
- support to the development of useful products and improvement of their ability to work coordinately, collectively providing a more effective and user-focused service;
- execution of five Pilot Project (one in each African Regional Economic Communities) in non-meteorological application to experiment the operational use of MSG data in sustainable development programme.



AMESD

Defined as "the next step after PUMA" and the "precursor of GMES in Africa", the AMESD (African Monitoring of Environment for the sustainable Development) programme is to improve decision and policy-making processes for environmental management at national, regional and continental level in Africa, by facilitating the access to relevant EO information sources, and by increasing the overall information management capabilities.

The AMESD objectives will be achieved through four main lines of action,

1. Maintenance and upgrade of the PUMA infrastructure, namely the GEONETCast station,
2. Creation of five thematic networks (one for each African region) around specific priority areas, namely,
 - Water Resources Management (CEMAC),
 - Cropland and Rangeland Management (ECOWAS),
 - Land Degradation, Mitigation and Natural Habitat Conservation (IGAD),
 - Coastal and Marine Management (IOC),
 - Agricultural and Environmental Resource Management (SADC),
3. Provision of specialised training on the use of EO data for Environment management.
4. Institutional development activities aiming at helping the African Union in the coordination of the implementation of environmental policies in Africa.

Added Value

Through PUMA and AMESD, the use of Earth Observation in Africa is greatly encouraged and facilitated. Various African users are equipped and trained to receive Earth Observation data and products disseminated via EUMETCast and GEONETCast. In addition, PUMA and AMESD encourages the participating African partners to developing their own products based on Earth Observation and In-situ data to serve several applications relevant to various SBAs.

Relevance to GEO

PUMA and AMESD are mainly relevant to the following SBA: Climate, Weather, Water, Agriculture, Ecosystems.

They clearly contribute to the Capacity Building efforts of the 10-years Implementation Plan, and more particularly to the achievement of the following tasks:

- CB-06-04: GEONETCast (through the deployment of receiving stations)
- CB-07-01a: Engaging Donors
- CB-07-01d: Building National and Regional Capacity



Participants

The following GEO members participate in PUMA/AMESD effort:

- EUMETSAT
- European Commission
- WMO

Other participants contributing to the achievement of these two programmes include:

- ACP (Africa, Caribbean and Pacific)
- Group of States, the Commission of the African Union,
- African Regional Economic Communities (ECOWAS, COI, SADEC, IGAD, CEMAC)
- African States and various African institutions like AGRHYMET, IGAC, CICOS

Current Status and Next Steps

The GEONETCast receiving stations deployed all over Africa in the frame of PUMA, are now used on an operational basis by trained African persons. These GEONETCast stations allow Africans to have a direct access to all products disseminated through GEONETCast. AMESD is now on-going with the detailed definition of the various thematic and the building of the necessary capacity.

For the next steps, the African institutions (African Union, Regional Economical Communities and ACP Secretariat) have called for a Long-term continuity through the Maputo Declaration, which request the extension of European GMES to African, Caribbean and Pacific countries, known as the GMES Africa initiative. This initiative would be a good way to link African countries with the GEO process.