

MESA: Access to Earth Observation Data



- The Monitoring for Environment and Security in Africa (MESA) programme addresses the need for reliable, timely and accurate land, marine and climate data and information for Africa, exploiting Earth Observation (EO) data and technologies.
- MESA benefits the 48 ACP countries of the five Regional Economic Communities (RECs) of sub-Saharan Africa, namely CEMAC, ECOWAS, IGAD, IOC and SADC.
- **Continuity of meteorological infrastructure and data through the PUMA, AMESD and MESA programmes.**

- MESA builds on the **MTAP/PUMA Meteorological Transition in Africa Project/ Preparation for Use of MSG in Africa (MTAP/PUMA)** project, **and**
- the **African Monitoring for Environment and Sustainable Development (AMESD)** programme.
- PUMA focused on meteorological applications: 2001 to 2005.
- Created a pan-African network of 53 countries and 5 Regional Centres
- Equipped them with the infrastructure, training and support required for receiving the space-based meteorological information.

- AMESD (2007-2013) extended the use of Earth Observation to environmental monitoring.
- during the AMESD programme the PUMA Stations were upgraded to 50 PUMA 2010 Stations.
- Note that MESA added a Continental Implementation Centre at ACMAD (Niamey) for climate services,

- **Result Area 1** of the MESA programme is ‘improved and sustainable access by African stakeholders to Earth Observation (EO) data and information at continental, regional and national levels’.
- EUMETSAT plays a key role supplying infrastructure for both environmental monitoring and weather prediction.
- continuous supply of its satellite data and products free of charge via the EUMETCast dissemination system
- including access to Third party data.

- MESA Technical Assistance plays a major role in facilitating the deployment of PUMA 2015 Stations,
- mainly through the Supply Contract for EUMETCast based receiving stations.
- Using the framework of the MESA programme (developed from AMESD),
- Including regional and continental implementation centres to support the definition of beneficiaries
- and the delivery of PUMA 2015 Stations to Meteorological services and others recipients by the infrastructure Contractor.

- Technical Assistance coordinated specifications and award of the contract, and supervises the Contractor (TPZ consortium).
- Existing PUMA 2010 Stations being upgraded to PUMA 2015.
- AMESD Stations being upgraded to MESA Stations.
- PUMA 2015 Station integrates hardware:
 - one satellite reception antenna, 3 PCs,
 - and software for data acquisition, processing and exploitation.
- Operated by administrators and meteorologist users who have been specifically trained.
- To derive usable products for meteorological applications, such as weather forecasts, estimates of rainfall, etc.

- TA produced MESA Capacity Building Strategy
- including upgrading the equipment at the 4 AMESD training centres (Nairobi, Mauritius, Niamey, Pretoria),
- To allow training on both PUMA 2015 and MESA Stations (for environmental monitoring)
- TA coordinates PUMA 2015 training and materials by the infrastructure contractor (basic installation and administration)
- and more advanced training by the MESA Training Contractor (Particip consortium).

