



# Capacity building for Earth Observations and MESA Project

**Marco Clerici, JRC/IES**

**RSA-EU Space Dialogue – Skills Development Workshop  
Pretoria– 19<sup>th</sup> to 20<sup>th</sup> November 2013**



# Contents

- **MESA (and AMESD) Projects**
- **Training component in MESA**
- **RSA and MESA initiative**
- **Other JRC topics**



### MESA (2013-2017)

- Project coordinated by the AUC, managed by the EU Delegation at AU, funded through EFD (€37 millions overall budget).
- Objective: to support African decision-makers and planners in designing and implementing national, regional and continental policies and development plans towards **sustainable development**, thereby advancing the socioeconomic progress and well-being of African populations towards achievement of the Millennium Development Goals (MDGs)
- MESA will build an infrastructural platform (and a User community) in view of **GMES Africa**.
- Builds on Meteorological Transition in Africa (MTAP/**PUMA**) under 8<sup>th</sup> EDF and African Monitoring for Environment and Sustainable Development (**AMESD**) under 9<sup>th</sup> EDF.



## African Monitoring of the Environment for Sustainable Development AMESD



<http://amesd.au.int>

[Program Objective](#) [Speeches](#) [CEMAC](#) [ECOWAS](#) [IGAD](#) [IOC](#) [SADC](#) [Conferences And Events](#) [Documentary Video](#) [Forum](#) [Products And Services](#)



CEMAC-DRC Water Resource Management



YOU ARE HERE: [HOME](#)



### Upcoming events

No current events.

### Regional Implementation Centres

AGRHYMET in the ECOWAS Region  
BDMS in SADC Region  
CICOS in CEMAC Region  
ICPAC in IGAD Region  
MOI in SW Indian Ocean Region

### Resources

## AMESD Services are tested in Real Life Situations

Wednesday, 04 July 2012 14:24



The AMESD Regional Implementation Centers are delivering services to support natural resources management. The effort is directed to test and proof the utility of the portfolio of products delivered to target users in different thematic areas.

The Mauritius Oceanography Institute (MOI) is assisting national institutions of countries belonging to the Indian Ocean Commission to develop pilot projects for the identification of Potential Fishing Zones. The IGAD Climate Prediction and Applications Centre (ICPAC) is generating products to be used for the sustainable management of host spot areas for biodiversity and wildlife in IGAD countries.

In this article we report two stories of AMESD services used in Tanzania for the management of fisheries and in Kenya to tackle the problem of forest fires around Mount Kenya.

### Newsletter Archives



## AMESD (2007-2013)

- Operational Results achieved:
  - 1000 African Experts has been trained in the utilisation and maintenance of EO receiving station Infrastructure and EO data Operational Application.
  - In the political and policy frameworks: AMESD virtual forum for decision makers has been launched (2012), 2 AMESD Forums implemented (Dec. 2009 in Kinshasa and Jul. 2011 in Mauritius), Regional workshops for decision makers implemented.
  - 3 Workshops for Environmental Monitoring at Continental level implemented from 2011 to 2012 (Bulletins distributed to 150 Institutions and 1500 people).

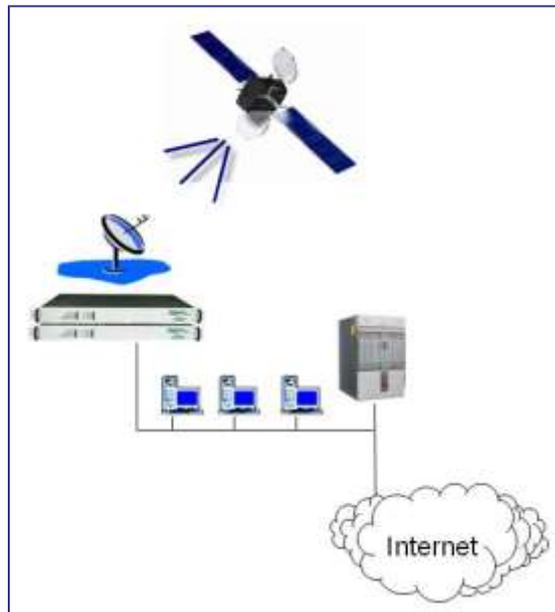
## JRC contribution to AMESD/MESA

The JRC has accompanied the PUMA-AMESD-MESA process from the beginning, with a very active involvement, especially in the implementation of the AMESD project. On own resources, and supported by FP7 Projects, the JRC:

1. Provided **technical/scientific support** to EU services and main stakeholders.
2. Developed the **eStation** system for EO data processing and analysis in 47 sub-saharian Countries.
3. Ensured permanent **training** assistance.

## JRC eStation

### Earth Observation Processing Server



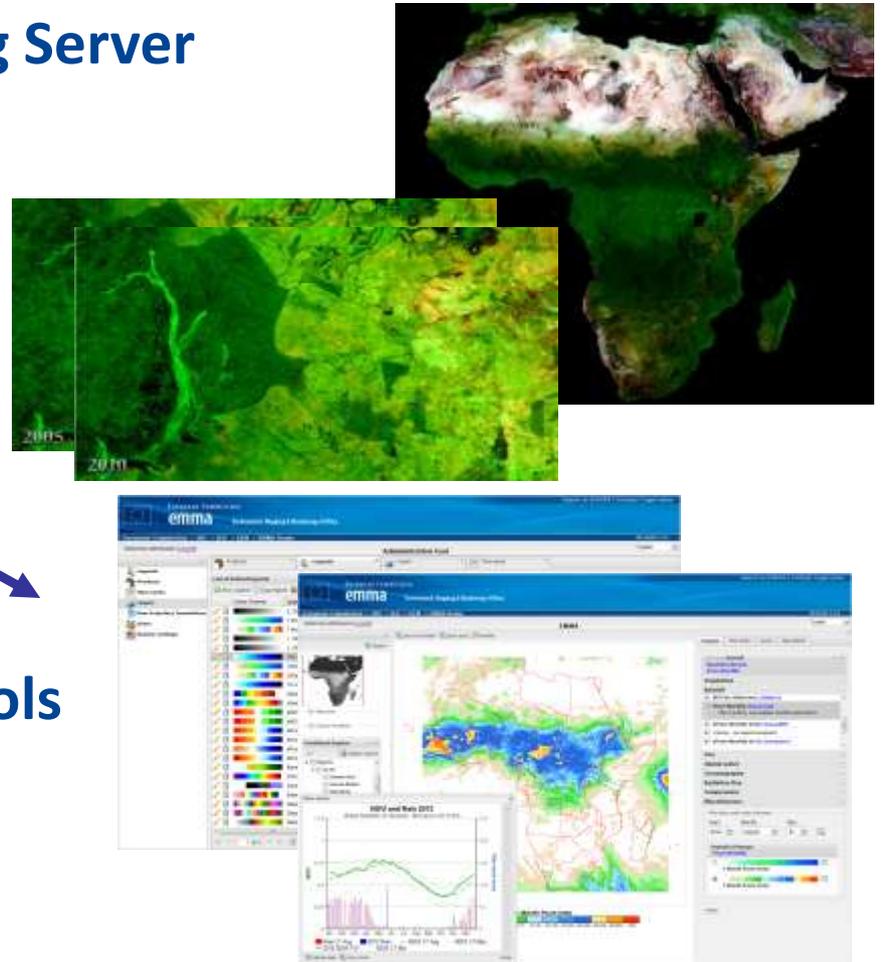
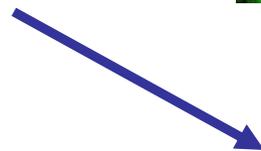
**eStation**

<http://estation.jrc.ec.europa.eu>

data



tools



## Overall MESA training approach (1)

- MESA Technical assistance will coordinate all MESA training activities, with the support of EUMETSAT, WMO and the European Commission's Joint Research Centre and other potential training partners.

Training will occur at:

- **Continental** level: for all training activities common to all countries, e.g. Infrastructure, EO data
- **Regional** level: for all training common to all countries in a specific region, e.g. thematic services
- **National** level: for training to the national users at national level

## Overall MESA training approach (2)

Training on:

- Technological aspects (Remote Sensing, data broadcasting)
- Thematic aspects (EO for environmental monitoring)
- Decision making and policy aspects
- Others (grant management, etc...)

Training methodology:

- Class-room training
- Distance Learning (synchronous and a-synchronous)
- Blended course

.. all training resources will be have open-access !

## Overall MESA training approach (3)

### Training infrastructure:

- Based on MESA SW/services/methodologies
- Based on existing training centre (e.g. WMO CoE for training on satellite meteorology), equipped with MESA equipment
- Link with universities at regional level

### MESA training budget:

- Continental training under the Service Contract (3Meuros)
- Regional training under the Grant (with support from Serv. Contr.) (a % of the 17 Meuro for Grants)
- National training under the Grant (a % of the 17Meuros for Grant)

## Training Model

- A number of **Instructional Themes** have been identified for each Result Area: they represent a 'set of competencies' to be created/strengthened (e.g. capability to run a PUMA Station/eStation, or to communicate Results, or to deal with EDF rules). An '**Instructional Theme**' corresponds in principle to a Training Course.
- Each **Instructional Theme** contributes to a Result Area, has an expected audience (in RIC/REC,NFP of MESA, NMHS) and can be provided by one of the following **Actors**:
  - 'Training Provider' (i.e. the Service Contract for Training)
  - Regional Grant
  - EUMETSAT/JRC

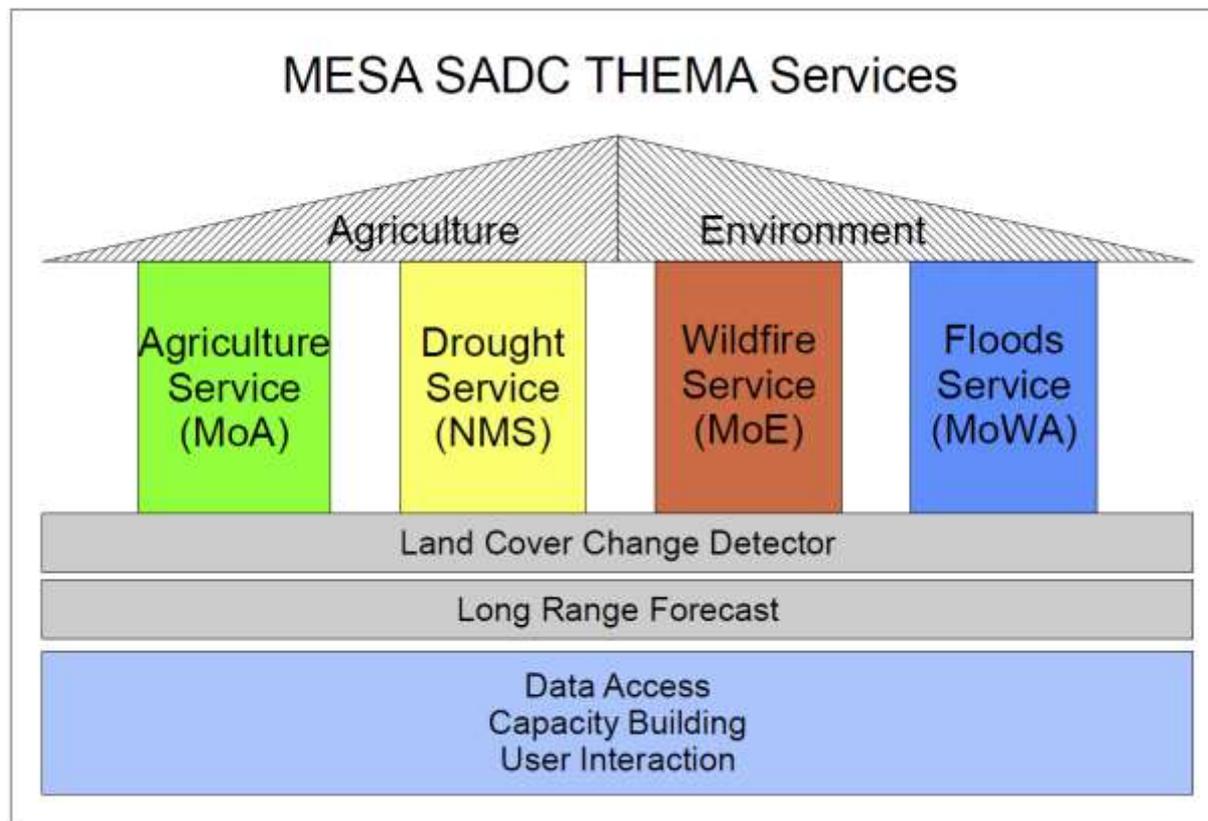


## MESA Training Calendar

All training activities **should start in 2014 and last until 2017**  
(within the Grant and through the Service Contract for training)

## South Africa and MESA

Four operational services on Agriculture, Drought, Wildfire and Flooding to be implemented





## South Africa and MESA

**Regional Implementation Centre (RIC):** the transition of the services between BDMS (Botswana Department of Meteorological Services) and SADC-CSC will be done during the grant implementation (to be effective at the end of the project). Furthermore, SADC-CSC should play a role in the diffusion/labelling of the products to the various countries (SADC-CSC has a regional mandate, and BDMS doesn't).

### **2 Co-applicants from RSA:**

- Agricultural Research Council (ARC)
- Council for Scientific and Industrial Research - The Meraka Institute (CSIR – Meraka)



In the **short term**, JRC will provide MESA with eStation and some training components on Earth Observations techniques and the eStation system itself.

In the **medium term**, JRC will engage input and feedback from RSA counterparts on the evolution of the eStation - especially concerning fire management in rangeland and protected areas. The possibility to extend the use of CSIR-AFIS terminal to other regions is under discussion.

In the **long term** JRC will participate in preparation and planning for Sentinel 2 and 3 data streams.



JRC is responsible, on behalf of ENTR for the management of the implementation of the **global component of the Copernicus land service**, which is achieved via two consortia of companies and research laboratories selected after calls for tender. Products are delivered since 1st Jan 2013 and are accessible in near real time (as well as archive products) via the following web site: <http://land.copernicus.eu/global>.

South African users are encouraged through the framework of the User Technical Group which is being put in place, to provide feedback on products and service specifications.

The GMES and Africa consolidation workshop is expected to endorse 3 thematic chapters of the GMES and Africa Action Plan, as well as specific



## II

*(Non-legislative acts)*

# REGULATIONS

## COMMISSION DELEGATED REGULATION (EU) No 1159/2013

of 12 July 2013

**supplementing Regulation (EU) No 911/2010 of the European Parliament and of the Council on the European Earth monitoring programme (GMES) by establishing registration and licensing conditions for GMES users and defining criteria for restricting access to GMES dedicated data and GMES service information**

to be services for environmental data production and dissemination, as well as space manufacturing. Indirectly, a variety of other economic segments will see the advantages of accurate earth observation, such as transport, oil and gas, insurance and agriculture. Studies show that Copernicus – which includes six dedicated satellite missions, the so-called Sentinels, to be launched between 2014 and 2021 – could generate a financial benefit of some € 30 billion and create around 50.000 jobs by 2030. Moreover, the new open data dissemination regime will help citizens, businesses, researchers and policy makers to integrate an environmental dimension into all their activities and decision making procedures.

**Thanks for your attention**