Activities at ACMAD, The African Centre of Meteorological Applications for Development

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Outline

- The objective
- The tools and products
- Training & Capacity building
- Research
The objective of ACMAD

Help African countries to achieve sustainable development through efficient use of Meteorological information

- Issue meteorological products available at http://www.acmad.ne/
- On the job training & capacity building for NMHSs
- Technology transfer
- Research
The products & tools

- **Climat & Environnement**
  - Seasonal Forecast bulletin
  - Monthly and 10 day bulletins
  - Climate scenarios
  - Impacts & Adaptations
  - Climate & Health
  - Training
Weather Watch and Prediction

24h - 10 days forecast charts & bulletins over the African continent

Production of WASA & WASF since AMMA extension to the eastern & southern Africa SASA & SASF for the SWFDP

Data archiving

Training (on the job, workshop...)

Research (Case studies, evaluation & models intercomparison, Regional modelling ...)
Tools for data processing & Forecasting

- Retim Afrique & MSG for real data reception
- 2 PC with MESSIR-VISION & VCS to analyse and visualize data received through MSG; available at all NMHSs but of somehow limited use; model data may not be available
- 3 PCs SYNERGIE for data analysis and forecast; 
  access to different models: Arpege, ECMWF, UKMO
  Double screen; Provides ample working space
  multiple windows concept; simultaneous examination and comparison of data from different platforms: imagery, models
- 1 workstation for numerical regional modelling
- 1 server for AMMA web site
Examples of products

WASF VALID 29-08-2006 18Z

WASA VALID 29-08-2006 18Z

Forecast Reasonably good
Examples of products

A good number of systems were not forecast. Why?
Examples of products

SASF valid 28-02-2007 18Z

SASA valid 28-02-2007 18Z

Reasonably good forecast but 5 days earlier ...
Tropical Cyclone Gamede was forecast for reach Madagascar on 23rd. Missed because of interpretation of model & IR data.

- 22/02/07 12Z T+00
- 23/02/07 12Z T+24
- 28/02/07 18Z T+30
Tropical Cyclone Flavio; predicted to reach Mozambique 3 days ahead

Analysis of 20/02/07 12Z

Forecast T+48

Vérification 22/02/07 12Z
Some disagreements between the three models; e.g., the vortex associated with tropical cyclone Flavio is not captured by the ECMWF, and the intensity is different in ARPEGE and UKMO. Model intercomparison + satellite imagery allows forecasters to decide on which one to use to predict specific features on specific regions.
Research

To improve our products to suit the NMHSs & other end users ie improve our forecast & predictibility for human security, for early warning systems, food security etc in order to reduce the socio-economic effects of high impact weather.

- Regional Modelling
- Model Evaluation & Intercomparison
- Forecast evaluation
- Document interesting case studies for later use in our project (ACMAD, NMHS, European partners, Americans?) of writing a forecaster’s handbook; Still seeking funds!!!