

**SERVICE DELIVERY BY THE UGANDA
NATIONAL METEOROLOGICAL SERVICES
FOR SUSTAINABLE DEVELOPMENT OF
THE COUNTRY**

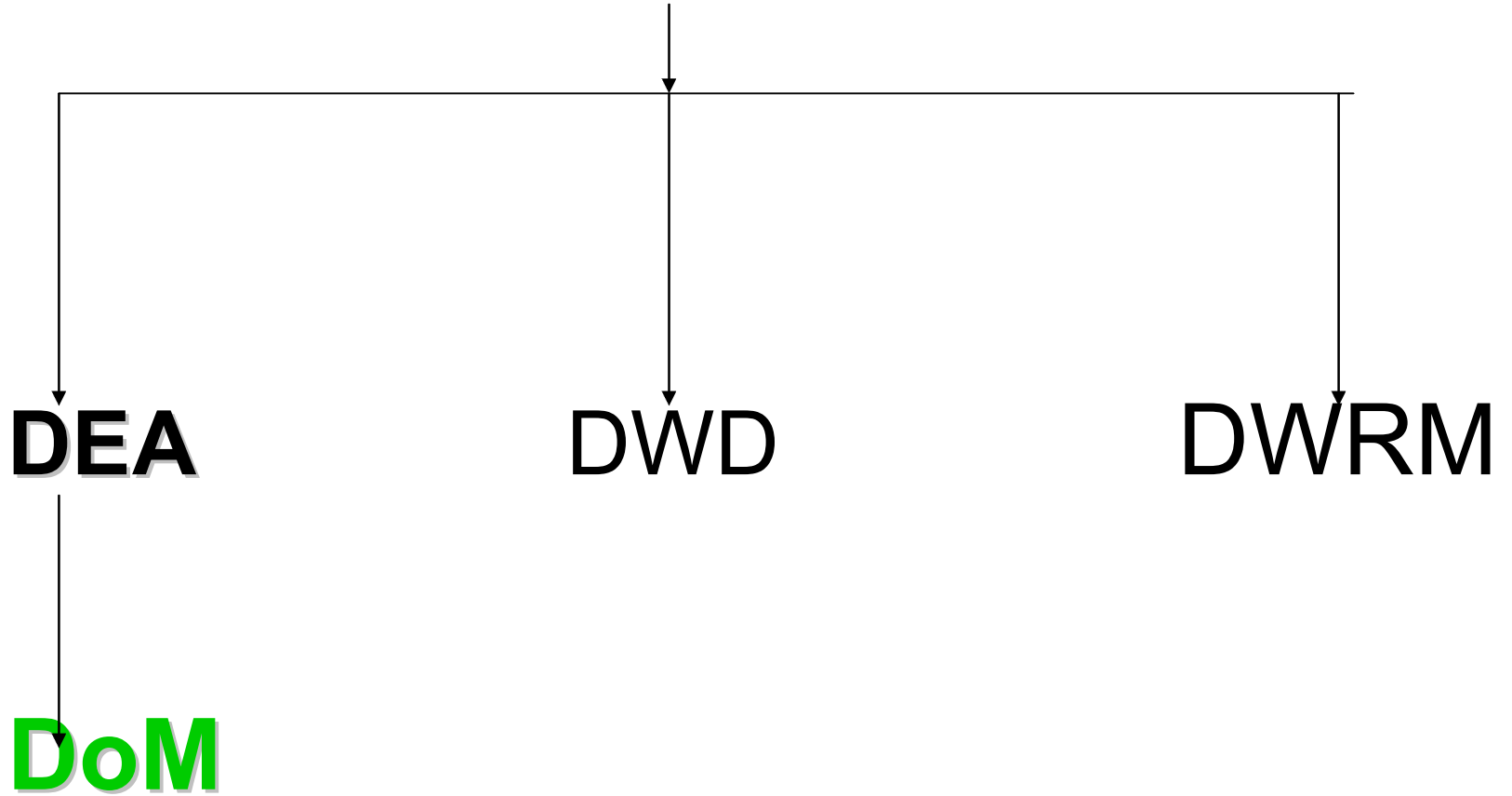
BY

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UGANDA WITH WMO

Establishment in Government

- **The Uganda Department of Meteorology (DoM) falls under the Ministry of Water and Environment (MWE)**
- **Directorate of Environment Affairs (DEA)**
- **Headed by a Commissioner**

MWE



Mandate of DoM

To monitor weather and climate and provide weather forecasts and advisories to Government and other stakeholders for use in sustainable development of the country

Vision of DoM

To be a centre of excellence on weather and climate services for sustainable development of Uganda

Mission of DoM

To provide quality, customer-focused, cost-effective and timely weather and climate information to all users

Structure of DoM

DoM is made up of four (4) divisions and each division is headed by Assistant Commissioner

1. Stations networks
2. Forecasting
3. Data Processing and Applied Meteorology
4. Training and Research

DoM

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graph TD; DoM([DoM]) --> SN[Stations Networks]; DoM --> F[Forecasting]; DoM --> DPA[Data processing And Applied]; DoM --> TR[Training and Research]; SN --> SN_Details["-Synoptic  
-Agromet  
-Hydromet  
-Rainfall  
-AWS  
etc"]; F --> F_Details["-NMC Entebbe  
-Soroti  
Forecast Office"]; DPA --> DPA_Details["-Data archive  
-Data entry  
-Agromet  
-Seasonal forecasting"]; TR --> TR_Details["National Met.  
Training School"];
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**Stations
Networks**

**-Synoptic
-Agromet
-Hydromet
-Rainfall
-AWS
etc**

Forecasting

**-NMC Entebbe
-Soroti
Forecast
Office**

**Data processing
And Applied**

**-Data archive
-Data entry
-Agromet
-Seasonal
forecasting**

**Training and
Research**

**National
Met.
Training
School**

Coordination Framework

- The Station Network Division responsible for the design of optimal network system, implementation and monitoring of the networks.
- The Training and Research Division responsible for the development of training and research programmes in collaboration with other regional centres and WMO
- The Forecasting Division is responsible for collection and distribution of real-time data and producing daily public and aviation forecasts.
- The Data Processing and Applied Division is responsible for collection and processing of all the data observed in Uganda.

Funding

- DoM is fully funded by government of Uganda
- Currently running a five year project “Meteorological Support to Plans for Modernisation of Agriculture (PMA)
- Process of transformation of the Department into a Government Agency.

Divestiture of the Department

- The Department was earmarked for divestiture since 1995, the process is currently in full gear.
- A draft bill is before parliament, 1st reading of the draft was done and referred to Parliamentary committee on Natural Resources for further deliberations

Cost recovery

- DoM has a cost recovery agreement with Civil Aviation Authority that dates back to early 1990s.
- Monthly remittances to the national treasury are made.
- However, the agreement is overdue for renegotiation in view of inflation and improvement in technology

Key Activities in administration

- Maintain and expand weather and climate stations throughout the country through routine inspection of weather stations to ensure standard procedure and equipments are available, calibrated and operational.
- In 2008, the Department spearheaded the creation of Climate Change Unit (CCU) under the office of PS/MWE
- Currently DoM has finalised the policy, legal, Business and strategic plans for transformation of the Department into an Authority and a draft bill is before Parliament for debate.

Key Activities under applied meteorology

- Strengthening institutional and coordination capacity
- Collect, receive, archive and transmit weather and climate data
- Analyse, develop and disseminate weather and climate products
- Train users on how to utilise weather and climate information
- Maintain and expand RANET centres upcountry

Services under data processing and applied meteorology

- Seasonal weather outlook plus monthly reviews and updates
- Agro-meteorological bulletins on dekadal (10-days) basis
- Weekly agro-meteorological 30 minutes talk show on National radio station.
- Climatological data for different users and clients
- Information dissemination under RANET
- User tailored information mainly for construction and insurance companies

Weather forecast services to different clients

1. Advisories and forecasts for Aviation
2. Meteorological Watch Office (MWO) for Uganda, keeping a watch of weather conditions over entire Ugandan airspace.
3. Public weather service issuing forecasts through Radios, Print media, Television, cell phone sms.
4. **Special tailored sms forecasts and alerts on severe weather to fisheries community on Lake Victoria (Pilot to commence February, 2011)**

Status of weather equipments

- Major out stations across the country are fairly equipped
 - 11 Synoptic station feeding the GTS
 - 20 agro-Met stations (NARO)
 - 18 Hydromet stations
 - 300 rainfall stations
 - 1 Upper air station at Entebbe airport
 - Several Automatic weather stations (AWS)

Equipment in Forecasting

- Global Telecommunication System (GTS). This is currently down due to migration issues from TAC to TDCF
- EUMETSAT satellite data receiving station upgraded from PUMA to AMESD station. This is fully installed and operational since mid December 2010.
- Two forecasters and one System administrator trained in operations of the system

Equipment cont...

- WRF model for short range forecasting, this was an offer from NOAA under the US government support to Severe Weather Forecast Demonstration Project (SWFDP) in developing countries.
- Satellite Aviation data Distribution System (SADIS), fully operation in our Pilot Briefing office. As backup, the Department is a registered user and whenever the radio is down the data server at Bracknell, UK is accessed via internet.

Key Initiatives and Programmes

- Collaboration with the WFP to establish an observatory network in the Karamoja region. Since 2008 over 20 Automatic Weather stations have been installed for real time data relay.
- Computer Aid project donated 200 used computers and funded trainings for table driven codes (TDCF) in preparation for the transition from the numerical format.

Key initiatives Cont..

- GTZ funded setting up a Numerical Weather Prediction lab for the Department by providing four computers and one main server
- Continuous support from IGAD Climate Prediction and Application Centre (ICPAC) in preparation of seasonal forecasts
- Support from NOAA climate Centre for training two staff in Numerical Weather Prediction and a work station for running the WRF Model for short range forecasting.

Designing severe weather warnings for Fisheries community over Lake Victoria Pilot Project

Collaboration in implementation

- Operational level – Uganda DoM
- WMO Secretariat contact – Tom Butcher
- Technical support – Ericsson international

Advisory support

- Paul Davies – UK Met Office
- Robert Stefanski, Chief of Agro-Met at WMO

Key activities Climate Change Unit (CCU)

- Capacity development for CCU staff on project formulation
- Awareness raising at Sectoral and Regional levels
- Development of climate change awareness materials
- Development/formulation of climate change policy adaptation and mitigation strategies, guidelines and consultancy services

Challenges

The Department of Meteorology has a number of challenges which include the following;

- Understaffing: A number of staff reached their mandatory retirement and left the service. Understaffing is now approximately 50%.
- The sub-sector has been under-funded for along time and as a result the field observing station network has seriously deteriorated.
- Getting ISO certified

Challenges Cont..

- Most of the important equipment are grounded or non existent yet they are capital intensive E.g. Radar, the Upper air system, wind profiler, forecasters system etc
- Procurement process is so slow and disrupts some activities.
- Uncertainty of the transformation of the Department into an Authority
- The institutional arrangements for climate change coordination, threatens to delay implementation of the already delayed actions.
- At operational level, the transition from TAC to TDCF coding formats has constrained operations. The infrastructure and skills are not yet available in DoM. Currently **synops** are transmitted to RTH Nairobi by emails

Recommendations

- Department of Meteorology should work closely with the PDU to procure all the pending equipments for better service delivery
- A promotion and recruitment drive should be initiated to improve staffing levels
- For capital intensive equipments, separate funding should be identified with the ministry of finance.
- Fast track the transformation of the Department of Meteorology into an Authority.
- A training program on TDCF is ongoing as a measure of managing the transition from TAC to TDCF

Recommendation Cont...

- Develop guidelines for integrating climate change into sectoral plans are being developed.
- Development of National Climate change policy.
- Undertake NAPA piloting and have this replicated in the whole country.
- Strengthen and increase awareness country wide.

The end

Thank you for your attention