

**PARLIAMENT OF THE REPUBLIC OF UGANDA**

**REPORT OF THE COMMITTEE ON ENVIRONMENT AND NATURAL  
RESOURCES ON THE UGANDA NATIONAL METEOROLOGICAL AUTHORITY  
(AMENDMENT) BILL, 2024**

**OFFICE OF THE CLERK TO PARLIAMENT  
PARLIAMENTARY BUILDINGS  
KAMPALA**

**APRIL, 2024**



## 1.0 INTRODUCTION

**Rt. Hon. Speaker and Hon. Colleagues,**

The Uganda National Meteorological Authority (Amendment) Bill, 2024 was read for the first time on the 9<sup>th</sup> April 2024 and referred to the Committee on Environment and Natural Resources for scrutiny. The Committee considered the Bill in accordance with Rule 189(c) of the Rules of Procedure of Parliament, and hereby reports.

## 2.0 BACKGROUND TO THE BILL

The Bill is premised on the Government Policy on rationalisation of Government Agencies and Public Expenditure (RAPEX) that was adopted by Cabinet on the 22<sup>nd</sup> February 2021.

Government has overtime realised a proliferation of agencies established through Acts of Parliament, Executive Orders, and administrative arrangements. Government has recognized that a limited number were established without due consideration for institutional coherence, functional duplications, overlaps, and affordability.

This proliferation of agencies has led to overlaps in mandates and uncertainties regarding jurisdiction. The high administrative costs associated with these agencies have strained the national treasury, compromising effective service delivery and stretching the Government's capacity to sustain them. Additionally, the generous salary structures within these agencies have created disparities between their employees and those in the traditional civil service, resulting in demotivation among public servants, hence Government's decision to rationalise some of these agencies.

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### 3.0 OBJECT OF THE BILL

The Bill intends to amend the Uganda National Meteorological Authority Act, 2012 (Act 11 of 2012) to enable the mainstreaming and rationalization of the functions of the Uganda National Meteorological Authority into the Ministry responsible for matters relating to meteorology.

### 4.0 THE UGANDA NATIONAL METEOROLOGICAL AUTHORITY

Uganda National Meteorological Authority (formerly Department of Meteorology) under Ministry of Water and Environment is a semi-autonomous government agency that was established under section 3 of the Uganda National Meteorological Authority Act, 2012, and is tasked under section 4 to-

- (a) establish and maintain systems for the rapid exchange of meteorological and related information;
- (b) establish networks of stations for taking, recording and transmitting meteorological observations as well as hydrological and other geophysical observations related to meteorology;
- (c) establish and maintain an effective national weather forecasting center for short, medium, and long term applications using state-of-the-art technology and contemporary best practices;
- (d) apply meteorology to aviation, marine transport, water resources management, agriculture, health, national defence and security, disaster preparedness, and other developmental activities;
- (e) research and train in meteorology and in related fields and to coordinate national, regional, and international aspects of the research and training;
- (f) establish a framework under which aeronautical meteorological services are paid for at commercial rates by end users at a rate to be determined by Regulations under the Act and to ensure that the framework is updated periodically;

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- (g) establish and maintain a total quality management system in its operations while providing the necessary data essential for environmental impact assessment;
- (h) monitor the state of the atmosphere in Uganda, at different time and spatial scales, analyze, document and disseminate weather, climate and climate trends and their implications on socio-economic development;
- (i) build capacity at local government levels for the implementation of the climate and weather programs through Uganda National Meteorological Authority regional offices;
- (j) promote the use of weather and climate services in development planning, build strategic partnership with national and international governments, agencies, academic institutions, civil society organizations, cultural and other institutions at various levels in the management of climate and weather programs;
- (k) mobilize resources to support climate and weather programmes and activities;
- (l) participate in the review, formulation, and implementation of weather and climate policies and programs;
- (m) interpret, review and recommend appropriate changes in the climate and weather policies as well as international instruments;
- (n) promote, guide and coordinate the implementation of policies and programs;
- (o) promote collaboration and strategic partnership with national and international governments, agencies, academic institutions, civil society organizations, cultural and other institutions at various levels in the management of climate and weather programs and projects;

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- (p) manage and exercise all authority over the National Climate Data Bank and Archive;
- (q) set and implement national standards in observations of weather and climate whose data is to be forwarded to the National Data Bank;
- (r) supervise any other weather and climate observers whose data is to go into National Data Bank;
- (s) assist government to meet its international obligations in conventions and other international agreements related to weather, climate and climate change;
- (t) prepare long-term development plans, annual programmes and financial estimates of the Authority, including any aid, grants or loans by international organizations; and
- (u) observe, record and transmit meteorological observations as well as hydrological and other geophysical observations related to meteorology and for that purpose establish networks of stations;

The key sectors served by UNMA include; transport mainly aviation and marine, defence, agriculture, disaster preparedness, environmental and water resources management, tourism and construction industry. UNMA accomplishes these responsibilities in collaboration and coordination with the World Meteorological Organization (WMO) and its Member States and other global and regional meteorological centers.

**5.0 COMPLIANCE OF THE BILL TO THE NATIONAL DEVELOPMENT PLAN III (NDP III)**

The Bill aligns with the goals of the National Development Plan III by prioritizing efficiency, resource optimization, and institutional harmony. NDP III provides for the installation of new and maintenance of existing automatic weather stations

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to ensure maximum functionality to ensure that government resources are strategically utilized to drive sustainable socio-economic transformation and development in the country.

## 6.0 METHODOLOGY

Following the guidelines set forth in Rule 129 of the Rules of Procedure of the Parliament, the Committee examined the Bill, undertaking various inquiries relating to it and consequently, the Committee:

- i. Engaged in discussions and received submissions from the Ministry of Water and Environment.
- ii. Interacted with and received memoranda from the Uganda National Meteorological Authority.
- iii. Examined pertinent literature from relevant countries as part of the comprehensive review process.

Comprehensively, stake holders with whom the Committee interacted with or received memorandum included; the Ministry of Water and Environment and the Uganda National Meteorological Authority.

## 7.0 LIMITATIONS

The Committee was unable to physically benchmark countries that have undertaken rationalization primarily due to resource constraints. Therefore, the Committee did not undertake comparative assessments through on-site visits and evaluations to learn from best practices.

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## 8.0 COMMITTEE ANALYSIS, OBSERVATIONS AND RECOMMENDATIONS

This part of the report will examine the proposed clauses of the Bill, their Constitutionality, and relevance in light of existing laws and policy on rationalization and the mischief they intend to cure. The examination is structured around the thematic areas outlined in the Bill.

### 8.1 Mainstreaming of the functions of the Uganda National Meteorological Authority into the Ministry responsible for matters relating to meteorology (Purpose of amendment of Act 11 of 2012)

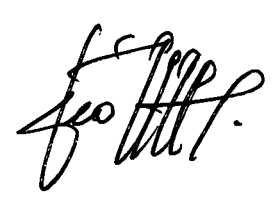
The purpose of amending the Uganda National Meteorological Authority Act, 2012 (Act 11 of 2012) as stated in clause 3 is to mainstream the functions of the Uganda National Meteorological Authority established under the Act into the Ministry responsible for matters relating to meteorology.

#### Committee observations

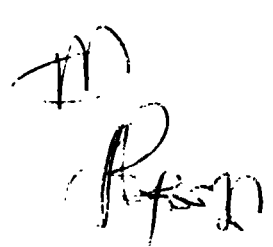
##### 1. Specialized Nature of Meteorological Services

The Committee noted that the Uganda National Meteorological Authority was created by the UNMA Act of 2012 and commenced in January 2014. Prior to this, Meteorological Services were provided for under the first East African Community until 1977 and thereafter the services moved to seven (7) different Ministries at different times. These were as follows:

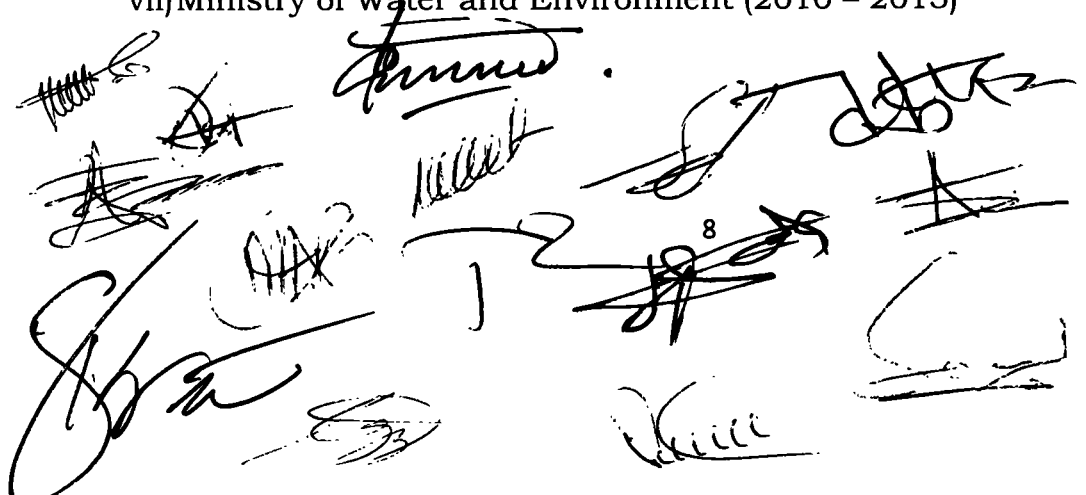
- i) Ministry of Finance (1977-1978)
- ii) Ministry of Transport and Communication (1978-1979)
- iii) Ministry of Aviation and Communications (1979- 1980)
- iv) Ministry of Natural Resources and Environment (1992)
- v) Ministry of Environment Protection (1992 – 1995)
- vi) Ministry of Lands, Water and Environment (1995 – 2010)
- vii) Ministry of Water and Environment (2010 – 2015)



A



HRA





The Committee noted that meteorological data is highly specialized yet used to serve a multiplicity of purposes which contributed to it being domiciled in several Ministries before it landed in the Ministry of Water and Environment under the Department of Metrology. It is from here that the functions of the Department of Meteorology transitioned to UNMA after the passing of the Act.

The Committee further noted that the Bill aims to facilitate efficient and effective service delivery by clearly delineating the mandates and functions of government agencies and departments and thereby avoiding duplication of mandates and functions. The report that guided the rationalization process indicates that the mandate of the Department of Meteorology under the Ministry of Water and Environment is duplicated by UNMA in regard to monitoring weather and climate conditions, and tendering technical advice for safe and economic air navigation, agricultural planning, water resource management and natural disaster management. The Committee however noted that no evidence of this duplication was adduced and the unique nature of UNMA's roles emphasize the need for UNMA to be an independent entity.

The Committee noted that UNMA's roles are specialized and specific and not duplicated at the Ministry. It is therefore important to retain UNMA as an autonomous institution, while the Ministry focuses on development of Policy.

## 2. Meteorology is an Essential Service

The Committee observed that a service is considered essential if such a service is critical to preserving life, health, public safety and basic societal functioning. Meteorological is an essential service as per the sixth schedule of the Public Service (Negotiating, Consultative and Disputes Settlement Machinery) Act, 2008.

The Committee noted that UNMA as a National Meteorological and Hydrological Service (NMHS) is key in all these areas. Meteorological services whether direct or indirect or user-specific are crucial in agriculture, aviation, construction

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industries, disaster management, energy generation and supply, environmental protection, fisheries, forestry, health, tourism, manufacturing, military (defense), transport, sport, urban planning, banking and financial services, and water resource planning and management among others but specifically;

a) **Contribution to Aviation**

UNMA issues forecasts to enable air navigation in and outside the country. For instance in 2020, it issued 2196 Terminal Aerodrome Forecasts and 13700 flight folders<sup>1</sup>.

b) **Tourism Sector:** Weather and Climate information provided by UNMA is crucial for tourists in planning travel (on both land and air itineraries).

b) **Agricultural Production:** UNMA plays a vital role in combating food insecurity by providing essential Weather and Climate information to support agricultural production thus contributing to national food security.

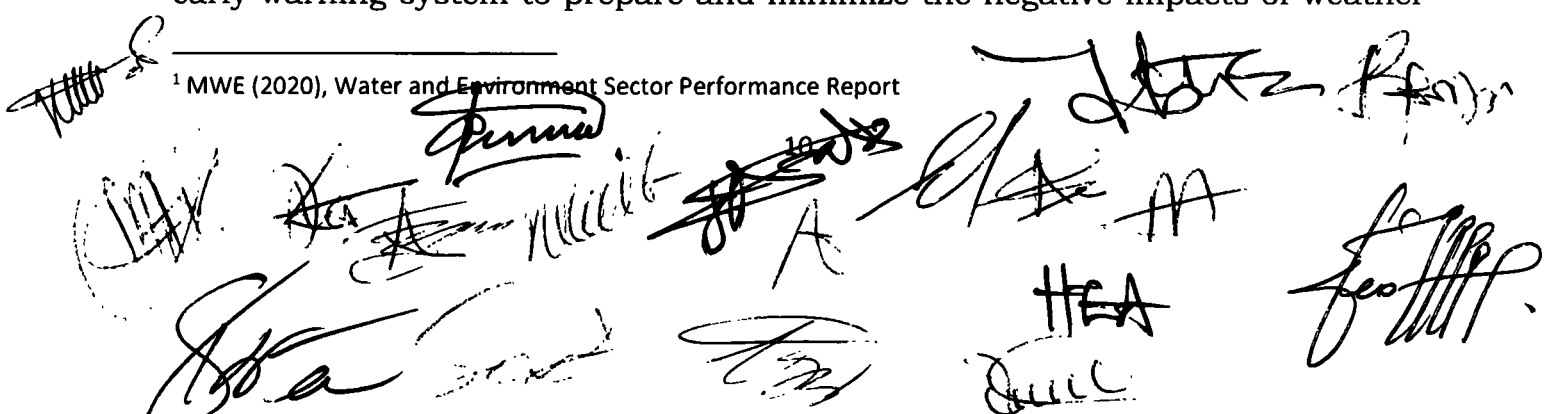
c) **Water Resource Quality and Availability:** UNMA's continuous monitoring of weather elements helps in managing water resources, monitoring floods, droughts, and ensuring the quality and availability of water resources in Uganda.

d) **Energy Sector Planning and Development:** UNMA's provision of countrywide rainfall data, wind speed/direction, and solar radiation is indispensable for realizing the energy potentials and master plan for the country, contributing to effective energy sector planning and development.

e) **Health:** In the face of increasing climate variability and climate change, UNMA's weather and climate monitoring is essential for early warning in the health sector, helping to address emerging health issues and mitigate the impacts of weather and climate-related epidemics such as malaria, typhoid, cholera, respiratory infections, and pandemics like COVID-19.

f) **Disaster Preparedness:** UNMA's role is critical in establishing an effective early warning system to prepare and minimize the negative impacts of weather

<sup>1</sup> MWE (2020), Water and Environment Sector Performance Report

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and climate-induced disasters in Uganda, including loss of lives, property, livelihoods, famine, and water scarcity.

The Committee therefore noted that given these cross cutting functions and the failure to effectively accommodate UNMA in any Ministry in the past, UNMA's unique mandate cannot be efficiently executed under the Ministry as proposed in the Bill.

### 3. International obligations

The Committee noted that weather, climate and the water cycle have no national boundaries and thus require cooperation at a global scale for countries to develop and benefit from applications of meteorology and operational hydrology<sup>2</sup>. The World Meteorological Organization provides the framework for such international cooperation in meteorology for its 193 Member States and Territories. It has become a global trend that National Meteorological and Hydrological Services (NMHS's) to transform into Semi-Autonomous Government Agencies (SAGA). This is to enable provision of more efficient and effective services for Disaster Risk Reduction and Social economic development, environment protection as well as building resilience to adverse impacts of climate change. Uganda being a member of WMO had to comply and the then department of meteorology metamorphosed into UNMA (**See letter from Secretary General of WMO dated 30<sup>th</sup> September, 2021 attached**).

The Committee further noted that regionally, Uganda is a partner state to the East African Treaty of 1999 which under article 100 provides for meteorological services and inter-alia calls on Member States to harmonize policies for the provision of meteorological services. It is in line with this, that the Sectoral Council on Transport, Communications and Meteorology (TCM) which is one of the established organs of EAC as provided in article 9(1)(d) implored all NMHSs within member states to become semi-autonomous. Uganda led the way that

<sup>2</sup> <https://wmo.int/about-wmo/overview>

resulted into UNMA. This was re-echoed during the 18<sup>th</sup> meeting of TCM which was held in Bujumbura Burundi from 6<sup>th</sup> to 10<sup>th</sup> February 2023. It was reiterated that the Republics of Burundi, Kenya and South Sudan should expedite the transformation of their Meteorological Departments to Meteorological Authorities as directed by the 16<sup>th</sup> TCM (**TCM report attached pg90-92**). Therefore, rationalization will weaken Uganda's (UNMA's) compliance with the regional standards for Meteorological Services.

The Committee further noted that Uganda is a member of the African Ministerial Conference on Meteorology (AMCOMET) and therefore is bound by resolutions of AMCOMET. The AMCOMET is a permanent forum where African Ministers convene every two years to discuss policy matters related to the development of meteorology and its applications and its contribution to the socio-economic development in Africa. Strategic pillar number one of AMCOMET requires each member state to formulate policies and provide the necessary legislation to ensure that NMHSs become autonomous or semi-autonomous and are adequately financed to fulfil their mandates.

#### **4. Comparative analysis of meteorological agencies in Africa**

The Committee noted that the common trend has been for meteorological departments to transition to autonomous or semi-autonomous agencies and not vice-versa. A number of African countries have followed suit namely:

##### **i) South Africa**

The South African Weather Service (SAWS) was established in accordance with the South African Weather Service Act (Act No 8 of 2001). The South African Weather Service (SAWS) is an agency of the Department of Environmental Affairs and is governed by a board.

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**ii) Ethiopia**

The government of Ethiopia officially established the National Meteorological Services Agency in December 31, 1980 under proclamation No 201 Of 1980<sup>3</sup>.

**iii) Nigeria**

The Federal Government of Nigeria approved the setting of the Nigerian Meteorological Agency (NiMet) by an act of government on the 21<sup>st</sup> of May 2003<sup>4</sup>. In 2022, the NiMet establishment act 2003 was repealed and replaced by the NiMet establishment act 2022. The New establishment Act grants the Agency the sole authority to grant approvals and licenses for the establishment of Meteorological stations and other related matters.

**iv) Ghana**

The Meteorological Agency was established in 2004 by the Ghana Metrological Agency Act, 2004 (Act 682) to replace the Ghana Meteorological Service Department, (which had been established in 1937)<sup>5</sup>.

The Committee also noted that our neighboring East African Countries have adopted this trend of meteorological agencies being semi-autonomous. For instance;

**v) Tanzania**

Tanzania Meteorological Agency (TMA) is a Government Agency established by the Government Executive Agency Act no.30 of 1997 and it was officially launched on 3<sup>rd</sup> December 1999<sup>6</sup>. The Agency is responsible for the provision of Meteorological services; weather forecasts, climate services and warnings and advisories information for the country.

**vi) Rwanda**

<sup>3</sup> National Meteorology Agency (NMA) -About NMA-Brief History [Available at] <http://www.ethiomet.gov.et/about/history> [Accessed on 17/02/2024]

<sup>4</sup> NiMet (2022) History of NiMet [Available at] <https://nimet.gov.ng/history-of-nimet/> [Accessed on 17/02/2024]

<sup>5</sup> Government of Ghana (2004) ACT 682 GHANA METEOROLOGICAL AGENCY ACT, 2004

<sup>6</sup> United Nations Convention to Combat Desertification Tanzania Meteorological Agency [Available at] <https://www.unccd.int/resources/knowledge-sharing-system/tanzania-meteorological-agency-tma>

The Rwanda Meteorology Service was created in 1963. However, in 2011, Rwanda Meteorological Service was transformed into Rwanda Meteorology Agency (Meteo Rwanda)<sup>7</sup>.

**vii) Kenya**

Kenya currently operates a Meteorological Department but is in the process of transitioning into a semi-autonomous agency. The 12<sup>th</sup> meeting of the East African Community (EAC) Sectorial Council on Transport, Communications and Meteorology (TCM) held on 21-24 September 2015, urged Kenya and Burundi, the only Partner States that had not effected the transformation of their National Meteorological Services, to expedite their transformation from the main civil service to semi-autonomous Government Agencies<sup>8</sup>. To that effect, Kenya passed the Meteorology Bill, 2023 which provides for the establishment of the Kenya Meteorological Service Authority, regulation coordination, monitoring, management, provision and control of meteorological services and for connected purposes.

**5. Compliance with International Civil Aviation Organization (ICAO) standards of ISO Certification**

The Committee noted that aviation is governed by the International Civil Aviation Organization. Its Convention requires that all airborne and ground based systems for aviation are supported by accurate and timely data since corrupt or erroneous aeronautical information/data can potentially affect the safety of air navigation. ICAO therefore recommends that each State ensures that users (aviation industry, air traffic services, etc.) receive timely and quality aeronautical information/data for the period of its intended use.

To achieve this, and to demonstrate to users the required information/data quality, the International Civil Aviation Organization provides that States must

<sup>7</sup> Rwanda Meteorological Agency (2024) Historical Background [Available at] <https://www.meteorwanda.gov.rw/index.php?id=12>

<sup>8</sup> Republic of Kenya- Ministry of Environment and Forestry (2020) National Meteorology Policy 2020

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establish a quality system and put in place quality management procedures at all stages (receiving and/or originating, collating or assembling, editing, formatting, publishing, storing and distributing) of the aeronautical information/data process.

It is upon this that UNMA, a service provider of the essential data and information (aeronautical meteorological information) for use by Aviation acquired the ISO 9001 certification. International Standard Organization ISO 9001 is an International Standard that specifies quality management systems requirements. Acquiring this certification demonstrates UNMA's commitment to quality, customer satisfaction and thus reinforcing confidence in Uganda's aviation data/ industry.

If rationalized, UNMA's ISO certification may be compromised, which in turn may affect quality of aviation data thus impacting the international rating of Uganda Civil Aviation Authority (UCAA).

**6. Ability to become self-sustaining**

The Committee noted that UNMA has the potential to generate non-tax revenue from various sources through the sale of various Weather and Climate related products and services. UNMA projects to collect **UGX 20,892,400,000 per year** due to improved forecasts that will result from the investments in Radars and improvements in net work stations across the country. In the long-term UNMA will be self-sufficient and can eventually be weaned off the Treasury. The projected revenue sources are summarized as follows:

**Table 1: Annal revenue projection from UNMA**

S/N	REVENUE SOURCE	ANNUAL PROJECTION (UGX)
1.	Administrative bids and tenders	200,000,000
2.	Aeronautical services	3,400,000,000
3.	Agricultural services	3,300,000,000
4.	Hydro Power projects	780,000,000

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S/N	REVENUE SOURCE	ANNUAL PROJECTION (UGX)
5.	Other Civil Works (Buildings)	780,000,000
6.	Research Projects	150,000,000
7.	Road works projects	1,900,000,000
8.	Solar power projects	300,000,000
9.	Water works projects	1,040,000,000
10.	Weather Equipment installation and licenses	2,00,000,000
11.	Mobile application to access public weather services	4,000,000,000
12.	Revenue from sale of forecasts	5,042,400,000
	<b>TOTAL</b>	<b>20,892,400,000</b>

Source: UNMA

## 7. UNMA's achievements after gaining autonomy

The Committee noted that UNMA's performance for the past eight years after attaining autonomy has improved. UNMA currently boasts of;

- i) National coverage with automatic weather stations now standing at 68%
- ii) Three (03) Weather Radars each with a modern office and an accommodation block was installed and is functional in Entebbe, Lira and Rwampara compared to the one radar that was not fully functional while as a department
- iii) ISO 9001:2015 Certification was achieved in 2020 after building the required Quality Management System and Governance competencies
- iv) Marine Forecasts are issued twice (two times) per day with resultant reduction in marine accidents.
- v) Regular Aviation Weather Services are being offered to 1 Airport (Entebbe Airport) and Five (5) Synoptics; Soroti, Gulu, Arua, Jinja and Kasese.
- vi) An active severe weather alert unit at National Meteorological Centre (Entebbe) is in place and issuing daily and hourly alerts.

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