

# AFRICAN METEOROLOGICAL SOCIETY

Newsletter



AfMS-NL-02 – October 2024



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# STATEMENT FROM THE AfMS BOARD CHAIRMAN

## Dr. Buruhani Nyenzi



It is encouraging to note that the African Meteorological Society (AfMS) has continued to move forward in implementing its planned objectives. The journey has not been easy because only some AfMS operational Committees have been fairly active during this reporting period, while others must put in much more effort. The former held their meetings to plan the implementation of their activities and make strategies for achieving those responsibilities. A few committees did not even organize a meeting during this reporting period. Those committees are urged to work harder to improve their performance in implementing their plans. Only then we can strengthen the AfMS to take its full advantage. The main activities and issues under consideration during this period included the following:

- Preparation of this second newsletter, the first one was produced in January 2024.
- Preparation of the First AfMS Scientific Conference planned to be held in Addis Ababa, Ethiopia on 27 to 30 April 2025. The detailed plans for a successful conference have been defined and the related activities are in progress.
- The plan to publish the AfMS Journal during the last quarter of this year or early next year is in progress. It is planned that this journal should have credible scientific papers reviewed to meet international standards. The AfMS Committee responsible for Publication is leading this process with the support of experts from other committees and other interested experts.
- The Finance Committee is currently being directed to enhance its resources because all these planned activities need finances for their implementation.
- AfMS is working with International Forum of Meteorological Societies (IFMS) to bring to the notice of the African National Meteorological and Hydrological Services (NMHSs) and Universities the need to establish their National Meteorological Society (NMSoc) and support them in all possible ways.

The AfMS Secretariat Office in Addis Ababa has continued to operate under difficult conditions without much funding, proper accommodation, and operational facilities such as quality internet services. This has caused problems in interacting with members. Some effort is being made to see if the Secretariat could be hosted within the Ethiopian NMHS or the World Meteorological Organisation Regional Association 1 (WMO RA1) office – both are in Addis Ababa.

The success of all the above-planned activities is very much dependent on the effort to be put in by all its committees. In addition, our work has been supported by the African Diaspora working in the developed world, especially in the USA, and by Friends of Africa from other Societies in other regions and countries such as India, the USA, the UK, etc. More support has continued to be received from developed countries societies such as the American Meteorological Society (AMS), Royal Meteorological Society (RMets), and others. The support provided by IFMS through its President, Dr. Harinder Ahluwalia, cannot be underestimated. He has been the main engine driving this process. Our Society appreciates his devotion, and dedication he has extended so far in ensuring that AfMS develops and attains its intended objectives of being an African Continental Meteorological Society.

The establishment of AfMS has shown us that certain activities individual NMSocs might find difficult to implement, e.g., conducting regular conferences, publishing a Journal regularly, having Education and Training and Science and Technology collaboration, etc., can be done much more easily on a continental basis. This collaboration will bring our scientists at the national and continental levels closer, fulfilling our major objective i.e., creating “collaboration” between professionals.

We would also like to thank WMO for their strong collaboration with AfMS and the MOU between our two organizations. The AfMS-WMO Conference is sponsored jointly by AfMS and WMO.

It is important to realize that the hard work of the African residents is the most important ingredient for the success of AfMS because we cannot always wholly depend on our colleagues living outside the continent. The effort made by Diaspora and Friends of Africa (D-FOA) should energize us and create an appetite for us to work together harder through volunteerism in building AfMS.



## DEVELOPMENT OF AFMS

### DR. HARINDER AHLUWALIA, PRESIDENT IFMS



IFMS is developing the Global Weather Enterprise (GWE) that consists of the Regional, and National Meteorological Societies connected to the WMO, World Bank, HMEI (Hydromet Equipment industry), and specialized societies (e.g. AGU, IAUC, ISB, etc.) through IFMS. This effort has resulted in the creation of the African Meteorological Society (AfMS: [www.africanmetsociety.org](http://www.africanmetsociety.org)).

AfMS has been created to develop capacity in Africa by uniting all existing National Meteorological Societies (NMSoc) of Africa into a cohesive unit and creating new ones in the countries where they do not exist. The value of NMSocs in attracting active and retired professionals from the Public, Private, and Academic sectors is well-proven. AfMS can provide a forum for collaboration between African professionals, and through its membership in the International Forum of Meteorological Societies ([www.ifms.org](http://www.ifms.org)), it can become an important link for worldwide collaboration.

Since WMO is also very interested in creating capacity in Africa, realizing the value of AfMS, it has signed an MOU with AfMS and both of them are conducting joint activities one of which is the forthcoming Conference in Addis Ababa, Ethiopia – the home of WMO RAI Office and AfMS' Headquarters – on April 27–30, 2025.

In addition, AfMS has attracted well-educated and highly-placed (in prestigious universities, and Research Labs) African Diaspora. We have also been able to attract a lot of non-Africans (whom we call Friends of Africa) who are helping us to create capacity in Africa through Education and Training (E&T) and Science and Technology (S&T) Collaboration. Their knowledge of Africa and the advanced countries where they have settled is an invaluable contributor to the objective of capacity building in Africa.

The basic duty of the National Meteorological and Hydrological Services (NMHSs) is to create capacity in their countries. They collaborate with other NMHSs through WMO and also on a one-to-one basis. Now we have given them AfMS which is conducting capacity-building programs through organizing conferences, having an AfMS Scientific Journal, and a Newsletter for Africans to publish and gain confidence. We have also created a website with a lot of information on various aspects of capacity building. This website will be further enhanced to serve African professionals even better.

Our Pilot Project in the Horn of Africa and East Africa on the Teacher Training Program (TTP) is going quite strongly and we have decided to prepare 11 courses. We have already formed teams, each with a Team Leader, to prepare and deliver the planned courses. We will look for funding to purchase some instrumentation for some practical training. Once the Pilot Project is completed, this TTP will be replicated in other African countries, other Least Developed Countries (LDCs), and Developing countries (DCs) worldwide.

We have also created a Learning Portal that provides links to various sites containing educational material.

Since AfMS is a strong ally of NMHSs, we expect them to help AfMS grow and provide assistance in all possible ways to make it grow and become strong. It is also important that developed Societies like AMS, RMetS, EMS, CMS, MSJ, IMS, CMOS, AMOS, etc. provide as much assistance to AfMS as possible to strengthen it and create capacity in Africa which is not responsible for Climate Change but will suffer most because of the insufficient knowledge base and infrastructure.

Finally, I urge WMO to provide maximum assistance to AfMS to grow and create capacity in Africa and to IFMS to create capacity worldwide, especially, in LDCs and DCs. This should be considered as a win-win proposition.

Let's make AfMS flourish and become a strong proponent of strengthening the knowledge base and providing advice on Infrastructure in Africa.

**THE MESSAGE FROM THE DIRECTOR OF WMO RA1 OFFICE FOR THE AfMS NEWSLETTER****DR. AGNES LAWRENCE KIJAZI, DIRECTOR, WMO REGIONAL OFFICE FOR AFRICA**

I am pleased to note the earnest efforts in place to revitalize the Africa Meteorological Society. The World Meteorological Organization Regional Office for Africa is glad to be associated with the Africa Meteorological Society on its publication. Indeed, this Society can provide an avenue in apex leadership in addressing the many hydro-meteorological challenges facing Africa.

At WMO, we are a specialized agency of the United Nations, that supports international cooperation for the development of meteorology, climatology, operational hydrology, training, and research with a membership of 193 Member states and Territories, 53 of whom are from Africa. We have been working very closely with the Africa Meteorological Society.

Africa is a continent at crossroads of history with the impacts of accelerated climate change, posing immense threats to the sustainable development and well-being of the continent. From severe droughts, floods, storms and other erratic weather patterns to rising sea levels and loss of biodiversity, the consequences of a warming planet are deeply felt across many communities in Africa.

As Director of World Meteorological Organization, Africa Office, I look forward to the day when Africa will build resilience through the strength of our people, the richness of our natural heritage, and the potential for transformative climate action. It is within this context that Africa must recommit herself to accelerating efforts towards a sustainable, low-carbon, and climate-resilient future. Through the Africa Meteorological Society, practitioners should find the space for robust discussions around how Africa can respond and create sustainable solutions. We at the WMO together with valuable partners are implementing the United Nations call for improved early warning services in the region.

WMO has been partnering with the Africa Meteorological Society, especially to advance main objective of the Society, which is to advance meteorology and related sciences, at the continental, sub regional, national and sub national levels. The activities of the Africa Meteorological Society directly feed into the work of WMO and its Members to promote public welfare through science, technology and engagement with end-users. We intend to work together in organizing a joint scientific conference slated for April 2025 that will help exchange of relevant scientific information to facilitate strengthening of national meteorological societies. The RA1 Capacity Development and Research committee is committed to enhance collaboration with AfMS through supporting scientific publications by promoting the AfMS scientific Journal as well as enhancing collaboration in joint research initiatives.

Finally, I would like to reiterate WMO commitment to enhance partnership with AfMS as per the MoU signed between us. I believe scientists from across Africa should contribute to shaping robust policies, innovative climate strategies, and multi-stakeholder collaboration to drive sustainable development while mitigating climate risks. We must bolster our efforts to build resilience and adapt to the changing climate, particularly in the context of vulnerable communities, ecosystems, and the environment. I look forward to seeing a homogeneous Africa in terms of capability and response towards hydrometeorological disasters.

# DEVELOPMENT STATUS OF THE AFMS

**DR. HARINDER AHLUWALIA**

IFMS is developing the Global Weather Enterprise (GWE) that consists of the Regional, and National Meteorological Societies connected to the WMO, World Bank, and specialized societies (e.g. AGU, IAUC, ISB, etc.) through IFMS. This effort has resulted in the creation of the African Meteorological Society (AfMS: [www.africanmetsociety.org](http://www.africanmetsociety.org)).

AfMS has been created to develop capacity in Africa by uniting all existing National Meteorological Societies (NMSoc) of Africa into a cohesive unit and creating new ones in the countries where they do not exist. The value of NMSocs in attracting active and retired professionals from the Public, Private, and Academic sectors is well-proven. AfMS can provide a forum for collaboration between African professionals, and through its membership in the International Forum of Meteorological Societies ([www.ifms.org](http://www.ifms.org)), it can become an important link for worldwide collaboration. Since WMO is also very interested in creating capacity in Africa, realizing the value of AfMS, it has signed an MOU with AfMS and both of them are conducting joint activities one of which is the forthcoming Conference in Addis Ababa, Ethiopia – the home of WMO RAI Office and AfMS' Headquarters.

In addition, AfMS has attracted well-educated and highly-placed (in prestigious universities, and Research Labs) African Diaspora. We have also been able to attract a lot of non-Africans (we call Friends of Africa) who are helping us to create capacity in Africa through Education and Training (E&T) and Science and Technology (S&T) Collaboration. Considering the importance of this group, we have formed a Committee of Diaspora and Friends of Africa called – D-FOA.

The basic duty of the National Meteorological and Hydrological Services (NMHSs) is to create capacity in their country. They collaborate with other NMHSs through WMO and also on a one-to-one basis. Now we have given them AfMS which is conducting capacity-building programs through organizing Conferences, having an AfMS Scientific Journal, and a Newsletter in which Africans can publish and gain confidence. We have also created a website which has a lot of information on various aspects of capacity building, and is expected to be further enhanced.

Our Pilot on Teacher Training Program (TTP) is going quite strongly and we are now preparing the 11 courses we have decided to include in the TTP. We believe that the following activities are some of the important ones to develop capacity in Africa through Collaboration between AfMS, WMO, and IFMS:

1. AfMS Website ([www.africanmetsociety.org](http://www.africanmetsociety.org)) is updated regularly. Eventually, we will carry capacity-building Programs of not only the AfMS but also WMO, IFMS, and NMHSs.
2. Quality Newsletter, the first was completed and is available on the following site: <https://africanmetsociety.org/news/first-newsletter-of-afms/>. The second one is this one.
3. The Scientific Journal of AfMS (JAFMS) is under preparation and will be issued as soon as we have sufficient high-quality material to publish it. The National Meteorological and Hydrological Services (NMHSs), and WMO are requested to help convince their Africa-based scientists to provide high-quality papers for publication. High-quality Opinion Papers can also come from other scientists and bureaucrats living anywhere but working on African issues or S&T, and E&T-related topics.
4. The first Conference of AfMS will be held in Addis Ababa on April 27-30, 2025 in partnership with WMO under the MOU the WMO and AfMS have signed.
5. The Education and Training (E&T) Program of AfMS – especially, the Teacher Training Program, and the Learning Portal. Courses are also planned for educating the Politicians, and the Public at large about the required protection from disasters due to Climate Change caused by Global Warming.

6. Collaboration in Science and Technology (S&T) between societies, as well as, between individual scientists. This will be achieved at the national level through the National Meteorological Societies (NMSocs), the Continental level through AfMS, and the global level through IFMS. This activity also involves the Global Partnership Program of the American Meteorological Society (AMS).

7. Creation of the National Meteorological Societies (NMSocs) in those nations where they do not exist. The collaboration mentioned above requires the existence of an NMSoc in each country.

As already stated, to leverage the existence of a strong African Diaspora worldwide and the desire of many non-African professionals (whom we call Friends of Africa (FOA)) to help Africa, we have created a committee called D-FOA which has a membership of almost 40 scientists and bureaucrats with a strong desire to build capacity in Africa. This Committee is expected to grow greatly as people see positive results from AfMS.

### Conclusions

With a population of approximately 18% of the world, Africa has contributed only 3.8% to GHG generation. However, because of the lack of capacity and infrastructure, Africa will suffer much unless steps are taken to create a strong knowledge base and infrastructure. Thanks to the UN for promoting the Multi-Hazard Early Warning System (MH-EWS) in all countries.

AfMS, NMHSs, WMO, and IFMS owe it to the African population to collaborate in all possible ways and create strong capacity in Africa to minimize the damage caused by Global Warming and Climate Change in Africa.

We also urge all African Professionals to work harder to help us create capacity in Africa which you call your home.



**VOLUNTEERS NEEDED!**

**AFRICAN PROFESSIONALS, DIASPORA, AND FRIENDS OF AFRICA:  
AFRICA NEEDS YOU TO HANDLE CLIMATE CHANGE**

To offer your services as volunteers please use the following links

African Residents: <https://forms.gle/SbPDf8ePVX1BpK9M7>

D-FOA Members: <https://forms.gle/26rAlpiZu6er5Wo36>

Assist in AfMS Conference Planning:  
Fill out the following form:  
<https://forms.gle/9Bc5s2qGqRjpA9hN7>

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# BUILDING CAPACITY IN AFRICA - THE STATUS REPORT OF AFMS COMMITTEES

**DR. HARINDER AHLUWALIA**

## 1. Background

To implement the AfMS Value Proposition, we have created ten Committees with the Chairpersons shown below. Some Committees have been active while others need to demonstrate their commitment by becoming more active.

It is a matter of enhancing the capability of a continent to protect its citizens from the vagaries of Climate Change. We need the Committee Chairs to be very active in ensuring that their committees fulfill their mandate to strengthen capacity in African countries through collaboration in Science and Technology and Education and Training. In addition, we are working on publishing the AfMS Journal and AfMS Newsletter and conducting Conferences at the continental level. Other important tasks we plan include sharing Best Practices, Certification of Professionals, Public Lectures, and providing scientifically sound information to bureaucrats and politicians.

The most active Committees have been those for Creating NMSocs (C2), E&T (C4), Communications (5), Publications (C8), and DFOA (C10). However, despite the lack of progress by some committees, we have been moving various tasks through the help of several committed volunteers.



## 2. Status of Committees

### 2.1 Finance Committee (C1)

The C1 (Finance Committee) is working on financing the Conference and the activities of the Secretariat. It also needs to collect funds for the operations of other committees. For example, to keep the website current requires external professional help. Also, the E&T Committee is working on the Teacher Training Program. In addition to the theoretical training, it would like to include some hands-on training. Therefore, some equipment will be required to be purchased.

### 2.2 Committee for Creating NMSocs (C2)

The C2 (Creating NMSocs) has had a couple of meetings and one Webinar on "How to create your NMSoc". We are following up with the following 12 countries that have shown interest in creating their NMSoc: Botswana, Central African Republic, Cape Verde, Comoros, Côte d'Ivoire, Gabon, Guinea, Lesotho, Mozambique, Senegal, Zambia, and Zimbabwe. Please see the article by Stephen Magezi, the Chair of this Committee in this Newsletter. This Newsletter also has an article providing simple steps to create your NMSoc. You can start with a simple NMSoc and add additional activities as the society develops. Even the smallest countries like Andorra, with a population of around 80 K, and Iceland with a population of around 350 K have created NMSocs in their respective countries. As a result, they are now enjoying the advantages of the European Meteorological Society (EMS) activities.



### 2.3 Committee for Recruiting Volunteers (C3)

This Committee has not done much activity and is encouraged to become active. In the meantime, I have been using a different approach which involved preparing a questionnaire using Google Forms and distributing it widely. This has resulted in 105 Volunteers from Africa. We have also recruited 37 Diaspora and Friends of Africa (D-FOA) Committee members. Additional active members for various committees are urgently needed. The Chair of this Committee has agreed to follow the route I have been using and recruit the additional required volunteers.

### 2.4 Education and Training (E&T) Committee (C4)

This Committee has the following important achievements to its credit:

1. We are conducting a Pilot Project for Teacher Training in the Horn of Africa and East Africa (Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan, Tanzania, and Uganda). The details of this activity are discussed in a separate article written by Prof. Dash, et al. We have formed two types of Teams.
  - a) One Team at the country level, each, with a Team Leader, to find the teachers to be trained, permissions to be obtained (e.g. from the Education Department) to introduce these courses, and to find quality teachers to be trained. This Committee must also recommend where the two centres per country for practical training should be located.
  - b) The second set of Teams is for developing courses. For each course, we have a team leader and multiple people for preparing and delivering courses to selected Teachers.
2. The second Project is a "Learning Portal" completed in 2022. However, it needs to be reviewed to keep it up-to-date and, if required, add any additional courses.
3. We will also start looking at the feasibility of having a Professional Certification Program for various types of professionals, e.g., Forecasters, Briefers, Aviation Meteorologists, Broadcasters, etc.
4. The C4 will also start organizing Webinars on important subjects of interest to African Scientists, and the public.
5. Eventually, Programs for educating the public and politicians on the weather, water and climate sciences will be developed, and presented.

### 2.5 Communications Committee (C5)

The C5 is designed to look after the communications requirements of AfMS. These requirements include:

1. Maintaining the Website of AfMS
2. Usage of the Social-Media for promoting various aspects of the Society
3. Usage of WhatsApp for communications between various Committees
4. Publishing of Newsletter
5. Publishing of the Journal
6. Etc.

This Committee has had a couple of meetings, and it needs many more volunteers, and some financial contributions.

### 2.6 Science & Technology (S&T) Collaboration Committee (C6)

The C6 is an important Committee of the AfMS for capacity building in Africa. It helps create collaboration between African professionals. In addition, it identifies collaboration opportunities between African Professionals and those from outside Africa. It leverages the existence of a similar Program of IFMS, and the Global Partnership Program of AMS.

To be effective, this Committee must develop a deeper understanding of the program and explain its benefits to its users. Some examples of potential collaboration engagements are:

1. Research collaboration between scientists,
2. Senior Mentors mentoring youngsters – this guidance can make a huge difference to the career development of youngsters,
3. Creating Collaboration between societies,
4. Creation of new academic programs,
5. New syllabus development,
6. Visiting scholar in residence (long term),
7. Guest lecturer (short-term),
8. Engineering support,
9. Proposal support,
10. Virtual, in-person, and hybrid collaborations.

Some of the benefits of the S&T Collaboration are:

- a) It promotes knowledge transfer, expert exchange, and resource management
- b) Mentoring can change the careers of youngsters
- c) Enforce NMSocs to play their role and fulfill their objectives in their communities
- d) Enlarge the network and enhance the power of Meteorological Societies
- e) Overcome the resource shortage issues.
- f) Strengthening relationships between NMSocs all over the World
- g) Creating mutual relationships between regional & national societies
- h) Linking the professionals in meteorology and related fields e.g., Biometeorologists, Urban Meteorologists, biodiversity, etc.

The C6 Committee had two meetings. We plan to make the S&T Collaboration Program a strong source of enhancing capacity in hydrometeorology in Africa. We plan to arrange some Webinars to explain the above points.

## **2.7 Conference Organizing Committee (C7)**

We have planned a Joint Conference of the AfMS and WMO scheduled to be held in Addis Ababa, Ethiopia on April 27-30, 2025. Two important documents related to the structure of the Conference and that of the Organizing Committees have been produced and are available on the AfMS Website. We expect this first Conference to be an opportunity for African scholars to discuss the issues related to Climate Change in Africa among themselves and D-FOA members and develop strategies to mitigate their effects. Scholars are requested to submit their papers befitting themes described in an article about the first conference of AfMS in this Newsletter. We have also developed a Committee of AfMS (EtMS – the sponsor of the Conference), Ethiopian Meteorological Institute, and WMO-RAI representatives to look after the various aspects of the Conference.

Incidentally, all this activity is happening outside the activities of the C7, which needs to become active and take ownership to ensure proper coordination. This issue needs to be resolved soon.

## **2.8 Publications Committee (C8)**

The Publications Committee has been one of the most active Committees. It created its first AfMS Newsletter in January 2024 and its second one is this one. The Newsletter about the Inauguration of the AfMS on November 30, 2022, was produced by IFMS and is available on the AfMS website.

The Committee is working hard on the following important undertaking – the AfMS Journal – which depends on R&D Scientists to publish their research, and well-established scientists to provide their opinion articles. We urge all African scholars and D-FOA members to publish in this Journal and support it. We are not charging any fee for publishing in this Journal at least for the first two years. After that period, we will review the situation and decide again.

This Committee will also assist in reviewing papers for the Conference and the Journal. We need many more scholars to join this Committee.

## **2.9 Awards Committee (C9)**

To encourage Volunteers, Scientists, and various other categories of professionals, we have started the Awards Program for which the first Awards Ceremony will be held at the First Joint Scientific Conference of the AfMS and WMO planned for Addis Ababa in April 2025.

The Committee has already defined the list of Awards to be given and should be defining the nominating and Evaluation processes very soon. Soon we will need these processes to start accepting nominations in the month of October, 2024 for awards to be given during the First Conference.

## **2.10 Diaspora & Friends of Africa (D-FOA) Committee (C10)**

There are several African Diaspora members who are professors in important Universities around the world, and there are many others who are working in senior positions in the R&D labs in foreign countries like the USA, UK, Europe, etc. To leverage their strength for enhancing capacity in Africa, we have recruited many of them to form a Diaspora Team. In addition, there are many non-African members working in our profession who are interested in helping Africa. We have created a committee consisting of these professionals, and we call it, Diaspora and Friends of Africa (D-FOA) Committee. We have a monthly meeting every first Friday of the month. In these meetings, we identify and discuss what assistance may be needed by AfMS and how we can provide it.

Our Conference Scientific Program Organization Committee (CSPOC) requires 15 members from Africa and 10 from outside Africa. We hope to get the latter category of people from members of D-FOA. We have already recruited 3 members from D-FOA and hope to find the rest of them too.

It is also important to mention that we have a member of the D-FOA Committee in each of the nine other Committees to provide any required advice and connect this important committee with the rest of the committees.

Many of the D-FOA members have become honorary members of the AfMS and in addition to paying membership fees, they have also donated some money to AfMS. We request others to do the same. The honorary membership of AfMS is also available to African residents for a reduced fee. We advise all other members of D-FOA to become honorary members of AfMS as soon as possible.

Similarly, D-FOA members are assisting us in the development of the Journal. We hope they contribute articles for publishing in the AfMS Newsletter, and Journal.

We expect D-FOA members to become more involved in the development of AfMS over time.

### 3. Conclusions

- 1) The AfMS is working hard to become a successful organization for capacity building in Africa in the most effective manner - collaboration.
- 2) This fact has been recognized by WMO, the major organization dealing with Hydrometeorology and Global Warming and resulting Climate Change, by signing an MOU with AfMS, the main points of collaboration have been presented in a separate article on that MOU.
- 3) To strengthen AfMS, we need much more dedication from all those involved in this noble cause.
- 4) Several dedicated African residents are required to staff and operate the 9 Committees described above.
- 5) It is also important to ensure that all countries have their National Meteorological Society and they become members of AfMS and IFMS for continental and worldwide collaboration.
- 6) The above steps will certainly enhance the capacity in Africa and fulfill our dream of seeing a prosperous and safe Africa.
- 7) Finally, with 26 French-speaking nations in Africa, the participation of these nations in AfMS is very necessary. To involve them, we need to have our literature in French too. However, that is a "chicken and egg" paradigm. AfMS is a volunteer-based organization. Volunteers create its literature. Unless French-speaking nations participate, we cannot have volunteers with proficiency in French. We urge French-speaking nations to create their NMSoc, if one does not exist in their country, and become a member of the AfMS fraternity. Only then we could call Africa – the United States of Africa.



**PLEASE ASSIST US IN  
PLANNING THE AFMS  
CONFERENCE AND THE  
JOURNAL BY RESPONDING TO  
THE FOLLOWING LINK:**

<https://forms.gle/ZUmXBKPE8kZtmMrA6>

Email: [coafms1@gmail.com](mailto:coafms1@gmail.com)  
Website: [africanmetsociety.org](http://africanmetsociety.org)



## CONFERENCE NOTICE

### THE FIRST JOINT CONFERENCE OF AFMS-WMO



#### 1. BACKGROUND

The International Forum of Meteorological Societies (IFMS: [www.ifms.org](http://www.ifms.org)) is dedicated to building capacity around the world. In 2022, it created the African Meteorological Society (AfMS) dedicated to building capacity in Africa to withstand the disastrous effects of Climate Change. To improve the economies of African nations, and to provide Early Warnings for various kinds of weather-related disasters caused by nature (accentuated by Climate Change), accurate weather forecasting is of fundamental importance. On the other hand, WMO which represents all National Meteorological & Hydrological Services (NMHS) of the world

has the same mission. Therefore, both of us have signed an MOU of cooperation. Therefore, AfMS and WMO are organizing their First Joint-Conference as follows:

Location: Addis Ababa, Ethiopia.

Venue: United Nations Conference Centre in Addis Ababa (UNCC-AA).

When: April 27 – 30, 2025.

At this conference, we will discuss the problems faced by African Nations, the potential solutions, and the path forward. We expect all African countries, Diaspora, and Friends of Africa (D-FOA) to be represented in this very important Conference. Please submit papers for the conference and join us on this momentous occasion.

You can show your interest in submitting a paper for the Journal, or Conference, and in attending the Conference on the following link:

<https://forms.gle/9Bc5s2qGqRjpA9hN7>

Please make sure that you provide the information requested on the above link. That will help us in planning the conference to prepare Africa to handle issues related to Climate Change.

#### Themes of the Conference

##### 1. Overall Theme of the Conference

Advancing Meteorological Science for Climate Resilience and Sustainable Development in Africa.

##### 2. Format of the Conference:

We plan to have 6 Plenary Sessions of 1.5 hours each and a minimum of 10 Parallel Sessions with the topics based on the themes presented in the following sections. The Plenary Sessions will be conducted as the first event in the morning and after lunch, except on the last day (Wednesday, April 30). On that day, there will be a special 6th Concluding Plenary Session in which we will discuss the conclusions of all sessions and decide the future direction.

Each Plenary Session will have a moderator and two invited Plenary speakers.

The Parallel Sessions (10 perhaps more) will be held as per the document "AfMS\_First\_Conference-2025-April-V01". Each Parallel Session will be one hour long. It will have a moderator and three speakers getting 15 minutes each.

#### 3. Themes of Plenary Sessions:

Theme 1: Early Warning in the Era of Climate Change.

Theme 2: Climate Change Resilience and Adaptation Strategies in Africa.

Theme 3: Strengthening Collaboration and Partnerships for Weather, and Climate Services in Africa.

Theme 4: Capacity Building and Training Initiatives for Meteorological Professionals in Africa.



Theme 5: Innovative Approaches to Enhancing Weather Forecasting and Early Warning Systems.

#### 4. Themes of Parallel Sessions:

- Theme 1: Innovations in Weather Forecasting and Early Warning Systems.  
 Theme 2: Climate Modeling and Projections for Regional Planning and Policy Making.  
 Theme 3: Advancements in Satellite Remote Sensing for Weather and Climate Monitoring.  
 Theme 4: Community Engagement and Climate Information Services for Vulnerable Populations.  
 Theme 5: Addressing Air Quality and Health Impacts in African Cities.  
 Theme 6: Water Scarcity and Climate Change: Managing Resources in African Contexts.  
 Theme 7: Climate Change Impacts on African Agriculture: Strategies for Adaptation and Mitigation.  
 Theme 8: Climate Finance and Investment Opportunities in African Nations.  
 Theme 9: Application of Artificial Intelligence (AI) in weather forecasting.  
 Theme 10: Water Scarcity and Climate Change: Managing Resources in African Contexts  
 For more details, please see the document called: "AfMS\_First\_Conference-2025-April-V01"

#### 5. Other Events we would like to include in the Conference:

With the Conference, we are hoping to include the following events:

- 1.A Hydromet Exhibition – Setup on Sunday, Open from Monday to Wednesday Noon.
- 2.A Training Course on a topic to be finalized.
- 3.Public Lecture on a topic of public interest – topic to be finalized – examples (1) Early Warning System and the role of the Government and public, (2) measures to reduce carbon footprint – individual effort.
- 4.Board Members with possible WMO participation,
- 5.Meeting of the Chairs of Committees.

#### 6. Other Activities in the Conference

We plan to include the following events:

- 1.Meet and Greet event (or Ice Breaker) on Sunday (April 27, 2025)
- 2.Awards Dinner on Tuesday (April 29, 2025)

#### 7. Sources of Income

- 1.Sponsorships
- 2.Registration Fee
- 3.Contribution of WMO
- 4.Contribution of Other Meteorological Societies and Services
- 5.Contribution of Aid Agencies
- 6.Contribution of Individual donations

#### 8. Sponsorship only "money can make the mare go"

- |                        |                     |
|------------------------|---------------------|
| 1.Diamond Sponsorship  | \$25,000 and above  |
| 2.Platinum Sponsorship | \$10,000 – \$24,999 |
| 3.Gold Sponsorship     | \$ 6,000 – \$ 9,999 |
| 4.Silver Sponsorship   | \$ 4,000 – \$ 5,999 |
| 5.Bronze Sponsorship   | \$ 2,000 – \$ 3,999 |
| 6.Contributor          | \$ 1,000 – \$ 1,999 |
| 7.Supporter            | \$ 200 – \$999      |

#### 9. Registration

The conference fee is graded as per capacity to pay e.g.

- ü Tier 1: Countries say \$400 (Advanced)
- ü Tier 2: Countries \$150 (Developing)
- ü Tier 3: Countries \$50 (African countries)

#### 10.Conclusion

Please plan to submit papers for the Conference, and join us on this momentous occasion.

You can show your interest in submitting a paper and attending the Conference on the following link:

<https://forms.gle/9Bc5s2qGqRjpA9hN7>

Please make sure that you respond to the above link. That will help us in planning the conference.

## **MEMORANDUM OF UNDERSTANDING (MOU) BETWEEN WMO AND AFMS – CONCERNING COOPERATION**

On April 24, 2023, WMO and AfMS represented by Prof. Petteri Taalas (SG-WMO), and Dr. Buruhani Nyenzi (Chair AfMS), respectively signed an MOU of cooperation. The main points of cooperation between the two organizations are:

1. This Memorandum of Understanding (hereinafter "MoU") constitutes the framework within which the Parties will, on a basis of reciprocity, develop cooperation in fields related to their mandates.
2. With due regard to their respective competencies, institutional settings, and operational frameworks, the Parties will inform and consult with each other, as appropriate, on issues of mutual interest, on scientific, technological, regulatory and development issues, in which cooperation may foster the purposes of the Parties.

The following activities are agreed:

a) Participation at the WMO constituent bodies sessions and AfMS conferences and meetings as observers. In other words, to have WMO retain the status of Associate Member in the membership of AfMS and hence assume an observer status in the activities of AfMS. Similarly, to grant AfMS observer status in the meetings of WMO's constituent bodies.).

b) Conducting joint undertakings and responsibilities as:

- (i) Jointly organize relevant joint scientific conferences, seminars, and workshops
- (ii) Exchange relevant scientific materials such as Journals, newsletters, and technical reports and expertise
- (iii) WMO (Regional Office) to provide support to AfMS and facilitate the establishment and strengthening of national meteorological societies (where they do not exist) and support their progress to ensure sustainability
- (iv) WMO and AfMS to enhance their partnership and collaborate on technical issues

3. Where issues of mutual interest are identified and the Parties consider that they may benefit from cooperation and resulting synergies, the Parties will define an appropriate structure for the planning, execution, and monitoring of their cooperation as well as for the dissemination of results. Such technical arrangements may take the form of written agreements (Implementing Arrangements, Letters of Agreements or Annexes) under the umbrella of this MoU.

4. The Parties will exchange their publications concerning issues of common interest and related fields.

5. Appropriate arrangements may be made by agreement from time to time for reciprocal representation of AfMS and WMO at meetings convened under their respective auspices which consider matters in which the other Party may have an interest.

6. The Parties will meet at least annually to take stock of progress and identify possible new areas of cooperation.

7. Each Party will appoint a Representative who will coordinate relations with the other Party, including between technical experts of the Parties, and who will keep the Head of his or her organization informed. Any change of Representative will be communicated in writing to the other Party.

8. Any use by either Party of the other Party's name, emblem, or logo, will only be made with the prior written approval of that other Party.

9. All activities under this MoU will be subject to availability of funding of the Parties and is not intended to be legally binding. The activities are to be conducted on a no-exchange of funds basis, unless otherwise agreed by the Parties in writing.

10. The Parties will settle between them any question of interpretation or difference concerning this MoU.

11. Nothing contained in this MoU will constitute or be deemed a waiver, express or implied, of any of the privileges and immunities enjoyed by WMO or by AfMS.

12. This MoU will enter into force on the date of its signature by the Parties, it being understood that where it is subject to approval or ratification, it will enter into force on the date on which the Party concerned has given written notification to the other Party that approval or ratification has taken place.

13. This MoU may be amended at any time. Any such amendment will be agreed by mutual consent and will be affected by an exchange of letters.

14. This MoU may be terminated by either Party with three months' written notice to the other Party.

15. This MoU will remain in force for an initial period of five years and will thereafter be renewed automatically, each time for a new period of five years, unless a written notice of termination is given by one of the Parties to the other at least six months prior to the renewal date, or the Parties have agreed on its termination or on its renewal by another period.



# Journal of African Meteorological Society (JAfMS)

## CALL FOR PAPER

The Journal of the African Meteorological Society (JAfMS) welcomes researchers, scientists, and scholars to submit their original research papers for publication in our esteemed journal. JAfMS is committed to advancing the field of meteorology within the African continent, providing a platform for disseminating cutting-edge research and fostering collaboration among meteorologists and atmospheric scientists.

### We invite submissions in areas including, but not limited to:

1. Climate variability and change in Africa Regional climate modeling and projections
2. Regional Climate modelling and projections
3. Weather prediction and forecasting systems
4. African monsoon dynamics
5. Extreme weather events in Africa
6. Agricultural and Environmental Meteorology in Africa
7. Remote sensing applications for weather and climate studies in Africa
8. Climate adaptation and mitigation strategies for African communities
9. Observational techniques and instrumentation in African meteorology
10. Socioeconomic implications of weather and climate in Africa.

### Submission Guidelines:

1. Manuscripts should present original research contributions and should not be currently under consideration for publication elsewhere.
2. Authors are requested to strictly adhere to the formatting and style guidelines outlined by JAfMS, available on our website.
3. All submissions will undergo a rigorous high-quality peer-review process to ensure scientific Submission rigor and quality.
4. Manuscripts must be submitted electronically via our online submission system, accessible on the African Meteorological Society website.
5. Authors are encouraged to include relevant figures, tables, and supplementary materials to support their research findings.

For further details: Submission Guidelines, Deadline, Notification of Acceptance, Final Manuscript Due Date, and Access to past issues of JAfMS, please visit our Website:

<https://africanmetsociety.org>

For any inquiries or clarifications, please contact the editorial team at

Email: [afmsjournal1@gmail.com](mailto:afmsjournal1@gmail.com), Phone: +2347031896607

We eagerly await your valuable contributions and anticipate fruitful collaborations to further our understanding of African meteorology.

Sincerely,

**Editor-in-Chief, Journal of African Meteorological Society (JAfMS)**

## THE OBJECTIVES OF THE JOURNAL OF AfMS

### Prof. Gideon Chukuma Ufoegbune, Chair AfMS Publication Committee

#### 1. Aim

The Journal of the African Meteorological Society (JAfMS) is a publication of the AfMS.

The journal's main aim is to showcase research outputs that address the unique challenges and opportunities within the African context, contributing to a deeper understanding of weather patterns, climate dynamics, and the impact of climate on the African continent. The JAfMS is committed to advancing the field of meteorology within the African continent, providing a platform for disseminating cutting-edge research and fostering collaboration among African meteorologists and atmospheric scientists.

#### 2. Scope

Submissions are encouraged on a wide range of topics across meteorology, climate science, and weather forecasting. In addition to the pure R&D on these topics, we also encourage topics with a specific focus on African meteorological issues. The range of topics of JAfMS is aligned with the African Meteorological Society's mission and strategy. The journal is set to fill the existing gap by providing a platform for African scholars to publish high-quality research.

#### 3. Open Access Policy

The Journal of the African Meteorological Society (AfMS) is an open access International Journal. All published papers will be freely available online to read, download, and share. This is based on the principle that making research freely available to the public greatly enhances the global exchange of knowledge.

#### 4. Submission process

Submission of manuscripts is online. Manuscripts to be submitted must meet the following conditions:

- i. Manuscripts should present original research contributions and should not be currently under consideration for publication elsewhere.
- ii. All submitted manuscripts will undergo a rigorous double-blind peer-reviewed process to ensure the quality of papers based on merit rather than the reputation of the author(s).
- iii. Comments and decisions on reviewed manuscripts will be communicated to the prospective authors within 1-3 days following receipt of the reviewed manuscripts from reviewers.
- iv. Manuscripts must be submitted electronically via email address [afmsjournal@gmail.com](mailto:afmsjournal@gmail.com) or through the AfMS website [www.africanmetsociety.org](http://www.africanmetsociety.org).

#### 5. Guide for Authors

- i. Authors are requested to strictly adhere to the formatting and style guidelines outlined by JAfMS available on the website.
- ii. Authors are encouraged to include relevant figures, tables, and supplementary materials to support their research findings.
- iii. Authors are to adhere strictly to important deadlines related to submissions of manuscripts, resubmission of revised manuscripts, etc.

#### 6. Way Forward

6.1 The short-term plan of JAfMS

- a) Explore the possibility of having a bi-annual publication of JAfMS, and
- b) Explore the possibility of a quarterly publication of the Society's Newsletter (AfMS-NL).

6.2 Long term plan

The long-term plan of JAfMS is to float more than one type of Journal. Create additional types of Journals that will focus on specific areas of meteorology/ Climatology such as the Journal of Argo-meteorology, Journal of Urban Climate, Journal of Dynamic and Applied Meteorology, etc.

#### 7. Editorial Board

The Editorial Board of JAfMS comprises:

- a. Editor-in-Chief: Prof. Gideon Chukuma Ufoegbune
- b. Associate Editor: Prof. Tsegaye Tadesse
- c. **Board Members (Editors)**

- |                                    |                                  |                          |
|------------------------------------|----------------------------------|--------------------------|
| i. Prof. Rhoda Mojisola Olanrewaju | ii. Houmed Iwad Ali              | iii. Dr. Margaret Kimani |
| iv. Woyoyehu Legese                | v. Moses Kibe Kihiko             | vi. Dr. Anna Msigwa      |
| vii. Muhammed Labiru Abdullahi     | viii. Prof. Bernard Tarza Tyubee | ix. Dr. Sydney Samuel    |
| x. Faustine Tilya                  |                                  |                          |



## Areas covered by the JAFMS, and Submission Guidelines

Prof. Gideon Chukuma Ufoegbune

Editor-in-Chief, Journal of African Meteorological Society (JAFMS)



The Journal of the African Meteorological Society (JAFMS) welcomes researchers, scientists, and scholars to submit their original research papers for publication in our esteemed journal. JAFMS is committed to advancing the field of meteorology within the African continent, providing a platform for disseminating cutting-edge research and fostering collaboration among meteorologists and atmospheric scientists.

We encourage submissions on a wide range of meteorology, climate science, and weather forecasting topics, with a specific focus on issues related to African meteorology. The journal aims to showcase research that addresses the unique challenges and opportunities within the African context, contributing to a deeper understanding of weather patterns, climate dynamics, and the impacts of climate change on the African continent.

We invite submissions in areas including, but not limited to:

1. Climate variability and change in Africa
2. Regional climate modeling and projections
3. Weather prediction and forecasting systems
4. African monsoon dynamics
5. Extreme weather events in Africa
6. Agricultural and environmental meteorology in Africa
7. Remote sensing applications for weather and climate studies in Africa
8. Climate adaptation and mitigation strategies for African communities
9. Observational techniques and instrumentation in African meteorology
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4. Manuscripts must be submitted electronically via our online submission system, accessible on the African Meteorological Society website ([www.africanmetsociety.org](http://www.africanmetsociety.org)).
5. Authors are encouraged to include relevant figures, tables, and supplementary materials to support their research findings.

For important dates related to the Deadline for submission of manuscripts; Notification of Acceptance; Final manuscript Due, etc., please visit our website: <https://africanmetsociety.org>.

For any inquiries or clarifications, please contact the editorial team at email: [afmsjournal1@gmail.com](mailto:afmsjournal1@gmail.com), and Phone: +2347031896607

We eagerly await your valuable contributions and anticipate fruitful collaborations to further our understanding of African meteorology.

## MILESTONES OF THE COMMITTEE TO CREATE NATIONAL METEOROLOGICAL SOCIETIES (NMSOCS) AND LIAISON WITH EXISTING NMSOCS AND REGIONAL METEOROLOGICAL SOCIETIES (RMSS) AND THE INTERNATIONAL FORUM FOR METEOROLOGICAL SOCIETIES (IFMS)

**Mr. Stephen Magezi**

### 1. Introduction

In our first newsletter, we discussed the preliminary challenges of setting up the committee and the challenges of attracting membership. Indeed, there has been steady progress in some aspects and outstanding challenges yet in other equally pertinent aspects. The paper highlights the achievements, and the challenges, and proposes a win-win arrangement for the creation of more resilient NMSocs. As a committee, we remain as one of the ten standing committees for the African Meteorological Society (AfMS) that aims at facilitating the creation of NMSocs in Africa and liaise with other RMSs and the IFMS. As a method of work, the committee relies on volunteers to propagate the message regarding the creation of NMSocs. In addition, the committee relies on several strategic partnerships that can support the creation of more NMSocs.

### 2. Why the NMSoc?

Today most of the nations in Regional Association 1 (RA1 -Africa) of WMO continue to face the challenges related to weather, climate variability, and climate change. Handling this aspect of uncertainty related to weather as well as climate variability and change, can be a daunting task if handled by any one state in Africa in spite of the supporting environment created by the World Meteorological Organisation (WMO). It is always better to work together with both the Regional and International Partners. Indeed, the climate change phenomena are easily the biggest challenge to development in most of the RA1 States. It has led to a series of constraints related to both sustainability and national budget management in many developing states – the states that will suffer the most due to the negative impacts of climate change. This is coming at a time when many of the RA1 states are faced with a heavy debt burden. As discussed above, one of the ways of addressing this kind of challenge is to take refuge in both regional and international cooperation. Cooperation between the different NMSocs of Africa in particular and globally, in general, is one of the means through which states can begin addressing challenges that have been brought by weather, climate variability, and climate change. The AfMS brings together the NMSocs within Africa while the IFMS is a global effort at bringing the societies together for the benefit of meteorological science as well as the struggling economies of RA1. That is why it will be important that RA1 supports the aspect of NMSoc coming together under the umbrella of AfMS. Besides this, the cooperation aspect brings together scholars and scientists from a wide range of disciplines to discuss and provide practical solutions to the challenges of weather, climate variability, and change.

### 3. Committee Membership by June 2024

There has been a modest increase in the membership of the committee with additional representation from the Comoros, Kenya, Cameroon, and Zimbabwe. This increase is after the AfMS Board had called for volunteers to the committee. Presently, the members of this committee stand as follows:

| S/No | Name                           | Position on Committee | Country  |
|------|--------------------------------|-----------------------|----------|
| 1    | Mr. Stephen A K Magezi         | Chair Person          | Uganda   |
| 2    | Mr. Arthur Gar-Glahn           | Vice Chair            | Liberia  |
| 3    | Sam Ochoto                     | Secretary             | Uganda   |
| 4    | Dr. Guylene Dolvie CHUTE KAMGA | Member                | Cameroon |
| 5    | Dr. Ahamed Youssouf Abdou      | Member                | Comoros  |
| 6    | Mr. Workneh Degefu             | Member                | Ethiopia |
| 7    | Mr. Samuel Waithaka Kahuha     | Member                | Kenya    |
| 8    | Dr. Lucy Mtilatila             | Member                | Malawi   |
| 9    | Dr. Bradwell J Garanganga      | Member                | Zimbabwe |
| 10   | Ms. Liz Bentley                | Member                | N/A      |

Indeed, this is a good committee even though it is not regionally balanced. The committee has very few French-speaking members making it difficult to reach out to the francophone members. The committee would benefit if more Francophone members and others from different areas of Africa joined the committee. This would enable the committee to delegate members to nations where they can easily and fluently communicate or where they have a comparative advantage regarding weather and climate business relationships. All persons from the RA1 member states as well as sympathetic members from the diaspora are eligible to join any of the committees of the AfMS.

#### 4. The Mission of C2

Now that there is a functioning committee in place, there is a need for it to get as much support as possible to achieve most of its set objectives. These objectives include the following: -

- To ensure as much as possible that all African countries (Members of the RA1) – no matter how big or small – create their NMSoc. Once the NMSoc has been created, it is advisable that all other NMSocs do coordinate and eventually participate in AfMS activities fully, in addition to conducting their own national and vision specific activities;
- To advise that with Membership of the AfMS, NMSocs can create collaborations amongst themselves to benefit each other as well as the wider community within their countries and beyond;
- To advise that once created, NMSocs can encourage and enhance collaboration between individual members of these NMSocs in diverse fields of Science and Technology (S&T) as well as in Education and Training (E&T) among other related scientific and socioeconomic fields;
- To publicise the fact that NMSocs (once created) can benefit from potential collaboration (through the IFMS), between scientists from all participating countries within the framework of the IFMS.

#### 5. Progress of the committee by June 2024

Most activities of the Committee are always ongoing, and sometimes repetitive as they involve constant reminders to the potential members of the benefits of creating an NMSoc. The following has taken place since the last newsletter was published:

- Through IFMS and on our own as AfMS, we have continued to give Webinars on “how to create an NMSoc”. Subsequently, several countries have shown interest. These Webinars usually cover the benefits of NMSoc and why each country should have one;
- The last Webinar was used to sensitise potential members about the benefits of creating an NMSoc. In addition, committee members and the AfMS board shared ideas regarding the way forward for AfMS and NMSocs in general;
- The prepared Terms of Reference (ToRs) to guide its operations are due for review. The committee is considering the review noting that some of the TORs guidelines require adjustment;
- The Committee Plan of Action has been prepared after several reviews by committee members and key stakeholders;
- The number of volunteers on the committee went up albeit minimally;

#### 6. Countries that have created National Meteorological Societies so far

Although there are 15 member states in RA1 which have created NMSocs, three of them have yet to join the AfMS. These are Egypt, Mauritius, and South Africa. The maximum possible number of NMSocs in Africa presently is 54. The twelve which are members of the AfMS are listed in the table below: -

|   |            |   |          |   |         |    |          |    |          |    |        |
|---|------------|---|----------|---|---------|----|----------|----|----------|----|--------|
| 1 | Benin      | 2 | Cameroon | 3 | Eden    | 4  | Ethiopia | 5  | Ghana    | 6  | Kenya  |
| 7 | Madagascar | 8 | Niger    | 9 | Nigeria | 10 | Sudan    | 11 | Tanzania | 12 | Uganda |

There are some National Meteorological and Hydrological Services that are yet to encourage their professionals to have an NMSoc in their countries but have chosen to be associate members of the AfMS. These are Algeria, Comoros and Djibouti. We continue to encourage these members to create an NMSoc and join the AfMS so that as a region we can benefit from the opportunities and synergy accrued from this act of coming together.

Through the efforts of the IFMS as well as those of the committee, some states have shown interest in creating an NMSoc. Those who have shown interest and have subsequently sought assistance include the following: -

|   |               |    |                          |    |            |   |          |
|---|---------------|----|--------------------------|----|------------|---|----------|
| 1 | Botswana      | 2  | Central African Republic | 3  | Cape Verde | 4 | Comoros  |
| 5 | Côte d'Ivoire | 6  | Gabon                    | 7  | Guinea     | 8 | Lesotho  |
| 9 | Mozambique    | 10 | Senegal                  | 11 | Zambia     |   | Zimbabwe |

Through this newsletter, these states are encouraged to formalise the creation of their own National Meteorological Societies or equivalent.

#### 7. Way forward

While the committee is the focal point for sensitising and promoting the creation of NMSocs, it's the sacred responsibility of all members to highlight the benefits of creating an NMSoc. The task ahead may appear daunting but with the cooperation of all, we shall surely overcome them. Remember that there is no better way to unify the professionals in our RA 1 countries than having a National Meteorological Society (NMSoc) which can attract volunteers from all the sectors of society including the Public, Private, and Academic sectors. It includes both the retired and active members of the community. Once created, all NMSocs become eligible to become a member of both the Continental Society AfMS ([www.africanmetsociety.org](http://www.africanmetsociety.org)) and the International Society IFMS ([www.ifms.org](http://www.ifms.org)). In this way, members become part of the Global Weather Enterprise (GWE).

Do look out for our Webinars to brief potential members on how to create the most basic NMSoc and then develop it to a higher level gradually. Kindly show your interest in creating an NMSoc by using the following link: <https://forms.gle/trsTPVNqKvKwRW7T9>.

## IFMS/AFMS MISSION: STRENGTHENING COLLABORATION IN AFRICA "BUILDING CAPACITY IN AFRICA BY CREATING NMSOCS WHERE THEY DO NOT EXIST"

### Simple steps to create your National Meteorological Society (NMSoc)

**Dr. Harinder Ahluwalia, President IFMS**

#### 1. Introduction

The value of having a National Meteorological Society (NMSoc) is well known. Once created, its members get opportunities to work with other professionals to share knowledge and conduct joint activities.

In addition to the countries that already have NMSocs, multiple other countries have shown interest in creating their own NMSoc. However, only two countries (Cameroon and Ghana) have been successful in this venture. This article demonstrates that the creation of an NMSoc can be quite simple. We can start with a very basic NMSoc and over time we can strengthen it to become as powerful as we want. We commence with the advantages of having your NMSoc. That will be followed by the most basic constituents of an NMSoc. Then we will discuss how these ingredients can be organized.

#### 2. Case for having an NMSoc

The International Forum of Meteorological Societies (IFMS) exists to create International Cooperation. One of its mandates is to have an NMSoc in every country and a Regional Meteorological Society in every continent. In 2022, we created the African Meteorological Society (AfMS) to unite all African NMSocs. Many advantages accrue from having an NMSoc. Some of the benefits of having an NMSoc are:

**Connected world:** In today's connected world all levels of societies and individuals can interact with each other, quite easily through WhatsApp and meeting APPs like Zoom, MS Teams, Google Meet, Webex, etc.

**Benefits of Connected World:** Both the IFMS and the AfMS are trying to create capacity in Africa through collaboration between professionals (active and retired from Public, Private, and Academic (PPA) Sectors) within a country by creating an NMSoc unless one already exists in that country. The advantages of an NMSoc as a capacity builder through collaboration between professionals is well known. NMSocs allow, collaboration not only within the country, but they also open the door for "collaboration" within the continent (through membership of AfMS) and worldwide (through membership of IFMS).

**Virtual Meeting Capability:** One does not have to travel in today's connected world where a lot of means of communication are available, it is easier to communicate, discuss issues, exchange information, conduct discussion groups, etc. However, coming to Conferences can be very beneficial in the exchange of ideas.

**Capability to share the Best Practices:** Every country needs certain common "Best Practices" which each normally prepares by itself. NMSocs can share the work through NMSocs/AfMS/IFMS, thus reducing the effort for all, thereby enabling National Meteorological and Hydrological Services (NMHS) to benefit from the Best Available Practices (BAPs) regionally and globally. This way much more can be achieved. Best Practices can include those required for operations of the NMHSs and NMSocs and those for building Institutional and Societal capacity among others.

**Availability of information on the Internet:** All types of courses are available on the Internet. We have created a Learning Portal which contains various courses. We plan to develop it further. It is available to all users.

**Group Activities:** Many activities can be done only as a group. Such activities include Conferences, Scientific Journals, Newsletters, and symposia among others. Education and Training (E&T), and Science and Technology (S&T) collaboration can also benefit from the synergies attributed to a group.

In short, having an NMSoc can connect you to the whole world. The following section presents simple steps to create an NMSoc.

#### 3. Steps to Create an NMSoc

1. A few professionals, supported by the National Meteorological and Hydrological Service (NMHS), and local Universities (which deal with Atmospheric Sciences) and the Private Sector, decide on the need for an NMSoc.
2. A core team is formulated and a leader is selected.
3. The Society's Name & activities are decided and the Constitution is prepared accordingly. Typical Constitutions are available on the AfMS Website. You can tailor your constitution based on the activities you would like to conduct.
4. Some Meetings are held to finalize the Constitution and Register the newly created Society. However, registration might not be necessary in the beginning. It should not be seen as a hurdle. But, if substantial funds are to be collected, it is important to register your NMSoc.
5. The Bank Account is created (desirable but may not be necessary in the beginning).
6. It is important to have a small council. The council membership should represent various areas of the country, and if possible, the council should represent different expertise.



7. Depending upon your requirements and the size of your NMSoc, you can make committees. For example, an NMSoc in a small country, or any country as a start-up can have:

a) A Committee to monitor AfMS and IFMS activities and keep its members informed about important programs.  
b) A Committee to arrange occasional get-togethers for networking, and if possible, a presentation and discussions.

c) A Committee that will arrange Remote Meetings. We will get AfMS to provide the Zoom facility.

8. The Teacher Training Program and the Learning Portal will be made available by AfMS/IFMS. The members of NMSocs will have to participate in their maintenance as volunteers and in advertising them.

9. The IFMS provides coordination of all Training Programs. This is required to ensure that the resources of the Global Weather Enterprise (GWE) members are used efficiently. Training Programs are predominantly done by larger organizations such as WMO, COMET, ECMWF, and larger NMSocs such as AMS, RMetS, etc.

10. The above activities can be done by using personal computers of members without making any extra investment till your society stands on its legs and can afford to purchase some such gadgets.

11. However, to do more activities, you will need to form a Financing Committee which will need to make a Budget & decide on sources of funding.

12. Funding is sought and collected.

13. Prioritize activities and start carrying them out.


#### 4. Conclusions

1. To build capacity against Climate Change and strengthen hydrometeorology, each country must endeavour to have an NMSoc to unite its active and retired professionals from all sectors (PPA) and provide them with a forum to network and collaborate.

2. The existence of Regional Societies such as AfMS of which only NMSocs can become full voting members, makes it possible to build capacity in your country by having just a basic NMSoc which implements the very basic committees listed in 7 (a), (b), and (c) and develop from there.

3. By having a basic NMSoc, your country can become a part of the Global Weather Enterprise and facilitate connection with not only your RMS (e.g. AfMS, EMS, FLISMET), but also IFMS, and through that to the whole world.

4. Unless you already have one, please create your NMSoc today.






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## COURSE PREPARATION FOR TEACHER TRAINING PILOT PROGRAM FOR AFRICA BY IFMS/AfMS

**Prof. S. K. Dash, Prof. Debo Adeyewa, and Dr. Harinder Ahluwalia**

### 1. Introduction

The International Forum for Meteorological Societies (IFMS) has played a crucial role in establishing the African Meteorological Society (AfMS), aiming to bolster Africa's capacity to address the challenges of climate change. Both IFMS and AfMS have been engaged in Capacity Development through education and training in Weather and Climate. We strongly believe that capacity building must begin with education at the grassroots level, specifically in schools and colleges. Keeping that in mind, a pilot project is being designed to be implemented in selected schools/colleges/universities in East African countries. Since teachers are the backbone of the society, training them is akin to training the trainers so as to get cascading effects.

Our ultimate objective is to educate school children, both formally and informally, about the important aspects of current climate variations and changes. This can be achieved by equipping science teachers in schools and intermediate colleges with the necessary knowledge through training on climate science and climate-related disasters. To support this, we are designing courses for teacher training, which will be delivered virtually through approximately 20 hours of lectures covering ten different themes. These themes and detailed courses will be developed with the involvement of experts, including some who are currently teaching at colleges and universities in their respective countries. The training will be implemented through 10 hours of virtual presentations as soon as possible.

Today, several course materials are available on the internet freely. However, it is prudent to design and formulate courses for the teachers based on the existing syllabus in African countries so that science, geography and mathematics teachers can easily grasp the fundamentals of weather and climate and also the current climate change related issues. Further, the courses need emphasis on the local weather and climate events so as to make them relevant and interesting. In order to achieve the ultimate goal of educating the students, teachers and the general public about current climate emergency, one has to take several small but important steps one at a time. Some of these aspects were discussed in an earlier AfMS News Letter. This particular article dwells on the immediate next steps: developing school teachers training courses tailored for countries in Eastern Africa through collective efforts of several volunteers.

Upon completing this initiative, the plan is to embark on subsequent projects to design weather and climate courses for pre-college, college and University levels across African countries. Hopefully, the feedback and assessments from the current pilot project will enable us to effectively focus on training professionals in hydro-meteorology. The outcome will also include recommendations for university courses necessary to cultivate highly skilled professionals in this field.

The primary aim of this commendable program is threefold: to enhance the knowledge of climate science at all levels in Africa, to build the necessary capacity, and to increase, and adapt to the causes and effects of climate change within the African context.

### 2. Methodology of the Pilot Teacher Training Program

To develop this program, the following strategic steps are being taken:

**i) Volunteers Selection:** To ensure manageability, we initiated a call for volunteers involving countries in the Horn of Africa and East Africa, specifically Ethiopia (5 volunteers), Kenya (13), South Sudan (5), Sudan (3), Tanzania (5), Uganda (4), Djibouti (5), Somalia (2), Eritrea (0), and Burundi (0). The number in parentheses indicates the number of volunteers from each country who have committed to participate. The team members for each country are listed in Annex A.

**ii) Team Leader Selection:** A team leader has been selected from each country to coordinate the program within their respective countries.

**iii) Course Subject Definition:** We defined eleven subjects to be covered in the Teacher Training Program. The details of these courses are presented in Annex B.

**iv) Course Team Leadership:** Team leaders for each of the eleven-course teams were selected. The teams and their leaders are listed in Annex C.

**v) Course Development Period:** The next three months will be dedicated to developing these courses.

**vi) Teacher Identification:** Teams from the Pilot Project countries, as mentioned in Annex A, have been tasked with identifying teachers to be trained.

**vii) Course Preparation Strategy:** It has been recommended to start with preparing courses for schools, adding more detailed content for colleges afterward.

### 3. Course Preparation Aids

We have identified and compiled various sites where many of these courses are available and the teams have been requested to download them, study them, and if required, improve them suitably.

### 4. Strategizing the introduction of proposed courses into the Education System

Through the team leaders of the Pilot Program countries, we are working on convincing their education departments about the necessity of these courses to build capacity in Africa. Securing this approval is essential before the courses can be delivered.

### 5. Schedule of Course Preparation

We expect course preparation to begin by mid-August. The preparation phase should take two months, followed by one month for review and updates. If permission from the education departments of the participating countries is granted, course delivery is scheduled to start in December 2024. These are tentative dates with the hope that things will proceed as envisaged.

### 6. Conclusions

Building capacity to withstand the negative impacts of climate change in Africa is a priority for the IFMS and AfMS. IFMS has been instrumental in establishing AfMS to enhance climate science knowledge and capacity in Africa. Recognizing the importance of grassroots education, IFMS and AfMS are developing a Teacher Training Program targeting schools to begin with.

To manage this ambitious project, we have initiated a pilot program involving countries from the Horn of Africa and East Africa. Several Volunteers from Ethiopia, Kenya, South Sudan, Sudan, Tanzania, Uganda, Djibouti, Somalia, Eritrea, and Burundi are participating in the important programme. Identifying teachers from the pilot countries and starting with courses for schools before adding more detailed content for colleges are also part of our strategy. Furthermore, we are working to convince the relevant education departments or ministries in Africa of the necessity of these courses to build capacity in the continent.

This comprehensive approach, from grassroots education to university-level curriculum development, is designed to eventually produce high-quality professionals in hydro-meteorology and enhance Africa's preparedness for climate change. We consider it a significant achievement and a testament to the confidence in this program that we have been able to engage so many high-quality individuals for the project.

We believe this program will have an important impact on capacity building in Africa.

#### Annex A: Country Volunteers from the Horn of Africa and East Africa for TT Courses

**Ethiopia:** Tadesse Tujuba Kenea, Zerihun Haile Mariam Tessema, Ashenafi Muluneh Teklu, Abel Sisay Tegegn, Melaku Takele Tegene

**Kenya:** Dr. Lydiah Gachahi, Prof. Christopher Oludhe, Dr. Margaret Kimani, Dr. Stella M. Aura, Samwel W. Kahuha; Dr. Richard R. Muita, Peter K. Njuguna, Samuel M. Machua, Dr. Pamela R.N. Kaithuru, Shadrack K. Magut, Dr. Jane Oteki, Dr. Vincent. O. Otieno

**South Sudan:** Badreldin Fartak, Juma Ali Mohammed Taradain, Aciek Thukul, Mikaya Murye Sule, Gisma Louis Edward

**Sudan:** Dr. Kamal Ibrahim, Mr. Mohammed Saif, Ms. Hanadi Saeed

**Tanzania:** Dr. Ladislaus Chang'a, Peter Mlonganile, Dr. Pascal Waniha, Habiba Mtongori, Chelele Mathayo Yuwendus, Meshack Mliwa and Valeth Jones Masaba

**Uganda:** Dr. Ogwang Bob Alex, Dr. Alex Nimusiima, Dr. Godwin Ayesiga, Mr. Adiga Hassan,

**Djibouti:** Ahmed Omar Hamed, Mohamed Youssouf ELMI, Omar Hassan Iltireh, Houmed Iwad Ali, Liban Ali

**Somalia:** Abdirashid Jama, Idil Hussein Hassan

Eritrea and Burundi have not provided any volunteers yet.

#### Annex B: List of Courses for Teacher Training

##### Course 1: Fundamentals of Weather & Climate

vDifferences between weather and climate; bring out the time scale factor such as daily, weekly, monthly, season, and climate with examples, especially from Africa.

vImportant weather and climate parameters, and a brief account of climate classification with particular reference to Africa.

vStratification of the atmosphere. Its constituents and significant roles of some important gases.

vFundamental forces in the atmosphere highlight the incorporation of rotation and revolution of the earth.

vBrief mention of the closed system of equations governing the dynamics of the atmosphere leading to scientific method of forecasting.

### **Course 2: Details of Regional Weather and Climate**

- v Different types of climate classification, and climatic Zones of the world.
- v Geographical location of Africa, and its different climate types.
- v Major weather events particular to specific climate types with examples.
- v Impact of weather events on the daily life of people with Examples from Africa.

### **Course 3: Observations and Monitoring of Weather Data**

- vBrief account of weather/climatic parameters and their Impacts from the societal perspective.
- vImportance of measuring and monitoring weather data.
- vDifferent sources of weather data and their relative importance.
- vHow weather data are used in weather forecasting.
- vHow climate data are used in climate services for the good of society.

### **Course 4: Use of satellite data in climate studies**

- vUsefulness of satellites in general in our daily life.
- vPolar and geosynchronous satellites.
- vRemote sensing technique and satellite data utility in weather forecasting.
- vSpecific satellites relevant to Africa with examples.
- vHow satellite data are useful for the benefit of Africa?

### **Course 5: Physics and Chemistry of Global Warming**

- v Brief explanation of electromagnetic spectrum highlighting visible and infra radiations.
- v Stefan-Boltzman Law and Wien Displacement Law in the context of short and long waves.
- vEarth's energy budget explained in very simple way with examples of solar and terrestrial radiations.
- vGreenhouse effect and Greenhouse Gases (GHGs) in the atmosphere.
- vAnthropogenic effects, global warming and its adverse effects.
- vIndicators of climate change around the globe emphasizing on Africa.

### **Course 6: Extreme Weather Events**

- v What are extreme weather events?
- v Examples of extreme weather events with focus on Africa.
- v Adverse effects of extremes with specific examples in Africa.
- v Examples of global warming and increase in extreme events based on IPCC study.
- v Early warning of extremes in rain, temperature etc. and coping with them.

### **Course 7: Early Warning and Disaster Management**

- vDifferent types of disasters with emphasis on Africa.
- vExamples of disasters increasing along with global warming.
- vStatistics of loss of life and property based on studies of international organizations.
- vEarly warning and effective implementation of disaster management.
- vMention of SDGs for the benefit of society.

### **Course 8: Fundamentals of Numerical Weather Prediction**

- vBrief history of weather forecasting.
- vFundamental mathematical equations governing the atmosphere.
- vBenefits of NWP, and examples of some notable world-leading organizations.
- vTypes of weather forecasting on different time scales and their use In different sectors.
- vNWP in Africa with specific examples.
- vUtility of NWP products openly available for their use in various weather forecasting.

### **Course 9: Role of Mathematical Models in Sustainable Development Goals**

- v Weather forecasting models vs climate models.
- v Efforts of IPCC in generating data for scientific analyses.
- v Utility of NWP products openly available for their use in various climate services.
- v History of international treaties with respect to SDGs.
- v Explaining all the SDGs and how to cope with climate
- v change issues for the benefit of all.



### Course 10: Community Science and Socioeconomic Development

- vSummary of changes occurring and to occur in future based on IPCC latest report.
- v Connection between fossil fuel use, industrialization, global warming, mitigation, and geopolitical complexities.
- v Mitigation and adaptation to combat climate change.
- v Alternative (renewable) sources of energy and geo-engineering methods.
- v Role of people at large and citizen science.
- vSuccess stories of PPP method of working.

### Course 11 Air Quality Issues

- vIntroduction to Air Quality (Basics of Air Quality): Definition and Importance, Types of Pollutants Sources of Air Pollution
- vMeasurement and Monitoring: Air Quality Monitoring Techniques, Ground-Based Monitoring, Satellite Observations
- vHealth and Environmental Impacts: Human Health Effects, Environmental Effects, Ecosystem Damage
- vRegulation and Standards: Air Quality Standards (National and International Standards)
- vPractical Applications: Community-Based Projects, Personal Air Quality Monitoring, Renewable Energy Sources



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**Annex C: Course Preparers and Presenters**

| Course Title  | Committee Coordinator  | Preparers  | Presenters   |
|---|------------------------|--|--|
| Fundamentals of Weather and Climate                                     | Lydia Wangechi Gachahi | Kamal Aldien Alawad, Muhammad Labiru Abdullahi, Richard Damoah, Lakshmi Kumar, Lydia Wangechi Gachahi, AntensayMekoyaJemaneh; Emmanuel Chilekwu Okogbue; Debo Adeyewa, Olanrewaju Rhoda Mojisola, Ogwang Bob Alex, AntensayMekoyaJemaneh, AntensayMekoyaJemaneh, Lahouari Bounoua, Shanti Majithia, Meshack Mliwa, Ladislaus Chang'a | Kamal Aldien Alawad, Muhammad Labiru Abdullahi, Richard Damoah, Lakshmi Kumar, Lydia Wangechi Gachahi, AntensayMekoyaJemaneh; Emmanuel Chilekwu Okogbue; Debo Adeyewa, Olanrewaju Rhoda Mojisola, Ogwang Bob Alex, AntensayMekoyaJemaneh, AntensayMekoyaJemaneh, Lahouari Bounoua, Shanti Majithia, Meshack Mliwa, Ladislaus Chang'a |
| Details of Regional Weather and Climate                                 | Kamal Aldien Alawad    | Kamal Aldien Alawad, Lydia Wangechi Gachahi, AntensayMekoyaJemaneh, Emmanuel Chilekwu Okogbue, Ogwang Bob Alex, AntensayMekoyaJemaneh, Ladislaus Chang'a   | Kamal Aldien Alawad, Lydia Wangechi Gachahi, AntensayMekoyaJemaneh, Emmanuel Chilekwu Okogbue, Ogwang Bob Alex, AntensayMekoyaJemaneh, Ladislaus Chang'a   |
| Observations and Monitoring of Weather Data                             | Pamela R. N. Kaithuru  | Kamal Aldien Alawad, Muhammad Labiru Abdullahi, Richard Damoah, Lakshmi Kumar, AntensayMekoyaJemaneh; Emmanuel Chilekwu Okogbue; Debo Adeyewa, Pamela R. N. Kaithuru, AntensayMekoyaJemaneh, Shadrack Kibet, Tichaona Gwaze, Kombo Hamad ,   | Kamal Aldien Alawad, Muhammad Labiru Abdullahi, Richard Damoah, AntensayMekoyaJemaneh; Emmanuel Chilekwu Okogbue; Debo Adeyewa, Pamela R. N. Kaithuru, AntensayMekoyaJemaneh, Shadrack Kibet, Tichaona Gwaze   |
| Use of satellite data in climate studies                                | Meshack Mliwa          | Omar Emam, Richard Damoah, Tsegaye Tadesse, AntensayMekoyaJemaneh, Debo Adeyewa, Ogwang Bob Alex, RC Bhatia, Ali Omar, Lahouari Bounoua, Shadrack Kibet, Kombo Hamad Kai, Meshack Mliwa  | Kamal Aldien Alawad, Omar Emam, Richard Damoah, Tsegaye Tadesse, AntensayMekoyaJemaneh, Debo Adeyewa, Ogwang Bob Alex, RC Bhatia, Ali Omar, Shadrack Kibet, Meshack Mliwa  |
| Physics and Chemistry of Global Warming                                 | Ladislaus Chang'a      | Lydia Wangechi Gachahi, AntensayMekoyaJemaneh, Emmanuel Chilekwu Okogbue, Lahouari Bounoua, Benjamin , Ladislaus Chang'a   | Kamal Aldien Alawad, AntensayMekoyaJemaneh, Benjamin Lamptey, Kombo Hamad Kai, Ladislaus Chang'a   |
| Extreme Weather Events  | Vaileth Jonas Masaba   | Kamal Aldien Alawad, Robert Goldhammer, Muhammad Labiru Abdullahi, Lakshmi Kumar, Tsegaye Tadesse, Ogwang Bob Alex, Pamela P. N. Kaithuru, Meshack Mliwa, Ladislaus Chang'a  | Kamal Aldien Alawad, Muhammad Labiru Abdullahi, Lydia Wangechi Gachahi, Tsegaye Tadesse, Ogwang Bob Alex, Meshack Mliwa, P. N. Kaithuru, Ladislaus Chang'a   |
| Early Warning and Disaster Management                                   | Bernard Tyubee         | Bernard Tarza Tyubee, Robert Goldhammer, Tsegaye Tadesse, Pamela P. N. Kaithuru  | Bernard Tarza Tyubee, Robert Goldhammer, Lakshmi Kumar, Tsegaye Tadesse, Pamela P. N. Kaithuru   |
| Fundamentals of Numerical Weather Prediction                            | Benjamin Lamptey       | Lahouari Bounoua, Benjamin Lamptey   | Kamal Aldien Alawad, Lahouari Bounoua, Benjamin Lamptey  |
| Role of Mathematical Models in Sustainable Development Goals            | Lahouari Bounoua       | Lahouari Bounoua, Benjamin Lamptey   | Kamal Aldien Alawad, Shadrack Kibet. Benjamin Lamptey  |
| Community Science and Socioeconomic Developments- Environmental Justice | Kandis Boyd            | Emmanuel Chilekwu Okogbue, Kandis Boyd, Pamela R. N. Kaithuru  | Emmanuel Chilekwu Okogbue, Kandis Boyd, Pamela R. N. Kaithuru, Kombo Hamad Kai   |

## THE AFRICAN DIASPORA AND FRIENDS OF AFRICA (D-FOA) COMMITTEE OF THE AfMS

Charles Ichoku

Professor, Department of Geography and Environmental Systems (GES)  
Director, Goddard Earth Sciences Technology and Research II (GESTAR II)  
University of Maryland, Baltimore County (UMBC)  
1000 Hilltop Circle, Baltimore, MD 21250

The African Meteorological Society (AfMS) Diaspora and Friends of Africa (D-FOA) committee plays an important role in supporting a cross-section of the programs and activities of the AfMS. This committee was formed shortly before AfMS was inaugurated in November 2022 and has been very active since then. Our committee members who are resident in different parts of the world come from academia, government, and the private sector. The enthusiasm of our members to support AfMS initiatives is remarkable. We hold monthly video calls where we discuss how to maximize our support for AfMS programs and activities. Accordingly, our committee has representatives in the AfMS governing board and all the 10 Committees of the society namely: (C1) Finance, (C2) Creating National Societies, (C3) Recruiting Volunteers, (C4) Education & Training, (C5) Communications, (C6) Science & Technology Collaboration, (C7) Organizing Conferences, (C8) Publications, (9) Awards, and (C10) Diaspora & Friends of Africa. Indeed, the D-FOA Committee is strategically positioned within the AfMS to support the initiation and implementation of concrete actions aimed at helping the society ensure its sustenance, growth, and the full attainment of its goals and objectives. Most members of the D-FOA Committee have volunteered or indicated their intention to volunteer in committees C1 to C9 and to lead or assist with specific activities whenever their expertise is needed. The roles played by our D-FOA members who volunteer in other committees come in a variety of forms, as briefly detailed below:

**1. Finance:** Members of D-FOA are actively helping to explore funding sources for AfMS. The letter for soliciting sponsorships and financial support internationally for the first AfMS conference being planned for the spring of 2025 was generated by a D-FOA member, Bob Riddaway, former President (2017–2020) of the European Meteorological Society (EMS), who has proceeded to help secure a pledge of 5,000 British Pounds from the Royal Meteorological Society (RMets) to support the first Conference of the AfMS in April 2025. Some other members of the D-FOA are currently soliciting similar support from other national and international societies and organizations, including the EMS, the American Meteorological Society (AMS), the Canadian Meteorological and Oceanographic Society (CMOS), the World Meteorological Society (WMO), and the African Development Bank (AfDB).

**2. Creating National Societies:** Whereas members of the AfMS committee for creating national meteorological societies (NMetSoc) are working very hard to realize this goal for as many countries of Africa as possible, members of the D-FOA committee are helping by reaching out to colleagues they know professionally or collaborate with in various African countries to encourage them to step up and play active roles in such endeavors within their respective countries. Other D-FOA members provide mentoring and advisory support. For instance, Dr. Harinder Ahluwalia, President of the International Forum of Meteorological Societies (IFMS), who is also the champion of AfMS and a D-FOA member presents webinars at regular intervals to educate members of the AfMS community on best practices in creating NMetSocs.

**3. Recruiting Volunteers:** Many D-FOA members have been recruiting volunteers to help support a wide variety of AfMS projects and activities. Just to mention a few examples, Dr. Harinder Ahluwalia has been a prominent champion in this regard, as he has been recruiting so many prominent personalities responsible for the success of the American, Canadian, European, and Asian meteorological associations to join the D-FOA and support various AfMS programs. Shanti Majithia, who serves as the Vice Chair of D-FOA constantly recruits prominent volunteers from the United Kingdom and across Europe, while Professor Jimmy Adegoke has been actively helping with the recruitment of volunteers and funding agencies from across Africa. These efforts complement those being conducted by the leadership and members of the AfMS within Africa.

**Education and Training (E&T):** Although the E&T Committee is chaired by a dynamic and prominent educator, Prof. Debo Adeyewa, a former University Vice Chancellor who is resident in Africa, the committee's membership includes a significant number of D-FOA members. The committee runs two major AfMS programs: (1) Training teachers for schools, colleges, and universities; (2) Development of the AfMS Learning Portal. Accordingly, AfMS has launched a Teacher Training Pilot Project in East Africa and the Horn of Africa involving nine countries: Kenya, Tanzania, Uganda; Somalia, Djibouti, Eritrea, Ethiopia, Sudan and South Sudan. A team of D-FOA members volunteered and led the development of the E&T materials to be used for the training pilot project. Those materials and their developers constitute powerful resources that can support the AfMS E&T programs in a sustainable way.

**5. Communications:** Several members of the D-FOA are also members of the Communications Committee that coordinate the content maintenance and updates for the AfMS website and other media. Communications functions are varied and include preparing relevant materials for announcing and promoting the upcoming AfMS conference and other activities. D-FOA members provide advice and actively contribute toward implementing these functions.

**6. Science and Technology (S&T) collaborations:** Many members of the AfMS D-FOA collaborate with colleagues in African institutions and organizations. Such international S&T collaborations are vital for effectively addressing issues of importance that transcend national or even continental borders. We are expanding these collaborations in a variety of ways, including jointly seeking and pursuing research and fellowship opportunities. Several D-FOA members are currently pursuing viable opportunities to realize these important aspirations. For instance, Dr. Samson Hagos, who is the D-FOA Secretary and a Scientist at the US Department of Energy (DOE) Pacific Northwest National Laboratory (PNNL), is coordinating a DOE Atmospheric Radiation Measurement (ARM) Mobile Facility Field Campaign titled "Highlands of East Africa Water Cycle Experiment (HIAFRICA)", which is planned to take place in East Africa in the coming year. Also, D-FOA member, Dr. Ali Omar from NASA Langley Research Center (LaRC) is coordinating an Air Quality Measurements for Africa initiative that is expected to eventually culminate in a space mission. He has contacted African-based scientists through AfMS to advance the African air-quality measurement idea toward a realistic concept development.

**7. Organizing AfMS Conferences:** As AfMS plans her first international scientific conference in the spring of 2025, many D-FOA members are part of the conference organizing committee, assisting with various important tasks involved in the planning process. For instance, D-FOA member, Dr. Jimmy Adegoke, is the Chair of the Awards Committee (C9), which is responsible for coordinating all the nomination and selection processes for all the awards to be presented during the conference. In addition, some D-FOA members will participate in the technical organizing committee for the conference and serve as reviewers of abstracts submitted to the conference. Presently, all D-FOA members are assisting in identifying internationally reputed scientists that may be recommended as potential keynote/invited speakers on specific topics of interest. Furthermore, several D-FOA members may be invited to serve in similar roles by the conference/session organizers, while others can propose and/or chair relevant sessions and present their own research and related activities at the conference. D-FOA members are also helping to identify and recommend appropriate exhibitors of relevant instruments and other technology and are helping to advertise the conference amongst colleagues and professional networks across the world.

**8. AfMS Publications:** The AfMS publications Committee is currently planning the maiden issue of the Journal of the AfMS (JAFMS), which is scheduled for publication within the next year. The Associate Editor of JAFMS is a member of D-FOA, Dr. Tsegaye Tadesse, who is a Research Professor at the University of Nebraska, Lincoln. The Associate Editor of the AfMS Newsletter is Dr. Loren White, who is a Professor at Jackson State University, Jackson, Mississippi. Indeed, D-FOA members are atmospheric and climate science professionals that understand the value of peer-reviewed and other publications in advancing our field of knowledge. Furthermore, we understand that weather and climate phenomena do not obey human-delineated territorial boundaries. It goes without saying that members of our D-FOA Committee are committed to helping AfMS in very significant ways including serving on the editorial board of AfMS publications, submitting manuscripts that report the results of our research, and serving as reviewers of submitted manuscripts.

**9. Awards:** The AfMS Awards Committee is chaired by a D-FOA member, Dr. Jimmy Adegoke, Professor at the University of Missouri – Kansas City (UMKC) and Senior Consultant at the African Development Bank (AfDB). A few other D-FOA members are volunteers on the committee, where they can assist in coordinating the nomination, review, and selection processes, as well as recommending relevant best practices guiding the program.

**10. D-FOA assisting the AfMS in miscellaneous ways:** In addition to our members participating in the other committees, the D-FOA Committee will continue to assist the AfMS in various other ways. Ongoing interactions between the D-FOA and the Africa-based AfMS members can open so many new opportunities, some of which we are not even able to predict at this time. Examples include: (a) serving on AfMS advisory committees; (b) partnering to develop research proposals and conduct research that can lead to new discoveries and the generation of important results that will be mutually beneficial to Africa and other regions of the world; (c) engaging in long-term scientific collaborations that can open new opportunities for some present and future members of AfMS. Many D-FOA members are very successful professionals, some of whom are professors at reputable tertiary institutions around the world and teach academic courses at undergraduate and graduate levels. We would be happy to teach courses at summer schools coordinated by AfMS or under its auspices. Some of us may be willing to spend our sabbatical leave or serve as visiting professors at African Universities, where we can teach courses that are relevant to the attainment of AfMS goals. Our members engage with African students and early career scientists that we meet at various international conferences or workshops that we participate in or through international collaborations. We are always happy to provide mentorship to such acquaintances, as we know how mutually beneficial such relationships can be for the advancement of the African society where some of us have professional interests and/or even family relationships.



## FURTHER DEVELOPMENT OF THE LEARNING PORTAL OF IFMS/AFMS

Dr. Harinder Ahluwalia, President – IFMS

### 1. Background

The work on the Learning Portal was initially started by some Indian scholars and contributors for the IFMS. When we created the African Meteorological Society, Dr. Robert Varley (the retired CEO of the Met Office of the UK) approached me to ask, how he could help the AfMS. I asked him whether he could help us develop the Learning Portal which makes it easy for different types of users to learn various aspects of our field (see the figure below). He readily agreed. He formed a team of approximately 8 consummate professionals to do this work, and he led this important project. The team met the schedule they had provided us and the result of that wonderful work is in front of you.

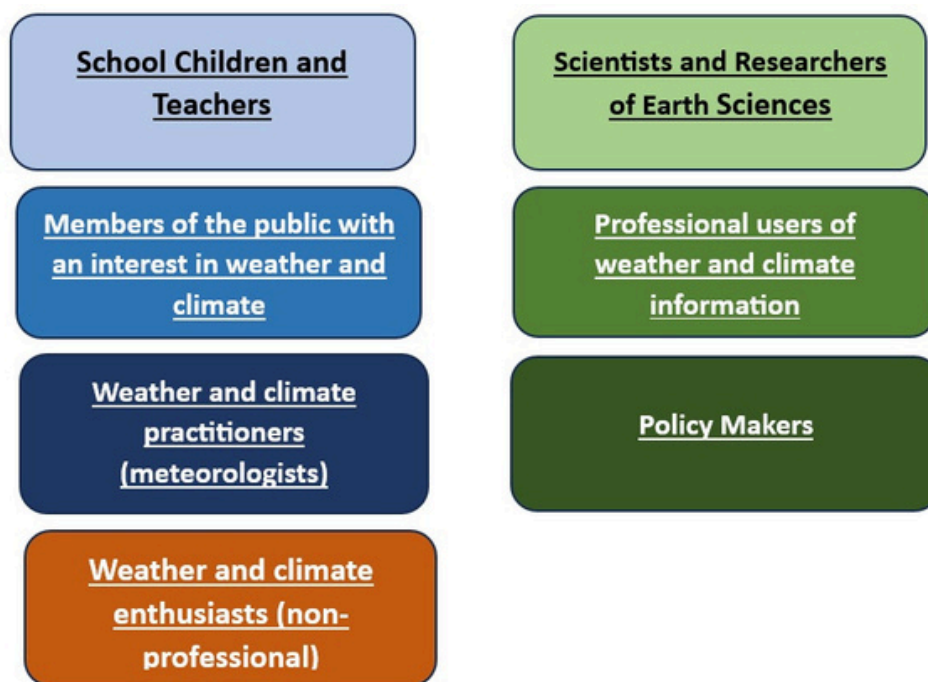
### 2. Introduction

Training is of fundamental importance to the African Meteorological Society's vision for strengthening meteorological capacity in Africa. A wealth of useful learning resources is freely available online, to meet the needs of a wide range of users across Africa.

This site we have created provides a clear, single portal for accessing recommended courses and resources that have been subject to a measure of expert scrutiny. Over 70 learning resources have been collated, each developed with a specific user group in mind (see below).

The relevant learning resources are presented in a set of downloadable PDF documents, one for each user group. The PDFs list each resource, its creator, a brief description, the languages it is available in, a Weblink to the resource, and the connectivity requirements for access. The PDFs are formatted for simple download over a low-bandwidth connection.

We welcome user feedback on this portal, including suggestions for additional learning resources. Please use the [AfMS contact form](#).



### 3. Further Development of the Learning Portal

#### 3.1 Initial Tasks to be Performed

One of the most important tasks is to get this Learning Portal to be better known to its potential users. To do that we need to create an explanatory document that explains the contents of this site.

Then conduct Webinars to explain its contents and how they can help its users.

We need to ensure that the site is well known to its potential users, and number of its users increases drastically.

#### 3.2 Further Development of the Learning Portal

In the meantime, we need to start reviewing the contents of this Website to determine that all the topics required to be covered for different types of users are covered to the appropriate detail.

The above task will identify some required updates which we must implement. Therefore, volunteers are required to implement the above tasks.

Please offer your services as qualified volunteers to fulfill the above tasks.





### Letter to AfMS Newsletter

**Dr. Anjuli Bamzai, AMS President, and Dr. Stella Kafka, AMS Executive Director**

Africa is vast and diverse. Its weather and climate vary greatly based on specific features such as latitude, terrain, altitude, vicinity to the ocean, vegetation cover, and human-geographical factors. The equator runs through the middle of Africa, as do the Tropic of Cancer and the Tropic of Capricorn, making Africa the most tropical continent. Weather, water, and climate play an important role in the daily lives of African people not only through agriculture, and the availability of fresh water but also natural hazards such as heatwaves, wildfires, and flooding.

This year the African Meteorological Society (AfMS) celebrates its second anniversary. The mission of AfMS is to “promote the advancement of the science, profession, and application of meteorology and related sciences with capacity building through education and training with special emphasis on activities for the benefit of the whole population of Africa.”

AfMS is already having an impact in efforts to build capacity, and advance meteorological science across the African continent through fostering collaboration among African nations on several fronts, e.g. enhancing the sharing of knowledge, resources, and best practices in weather and climate enterprise across the spectrum of research; weather forecasting and development of early warning systems; and services. By bringing together meteorologists, educators, and policymakers, AfMS will drive future innovations in data collection, and analysis crucial for mitigating the impacts of severe weather and climate change in Africa. Additionally, the AfMS will focus on training and developing the next generation of meteorologists for the continent, thereby ensuring that Africa has the requisite skilled professionals to address its unique challenges and strengthen resilience to the impacts of weather-related disasters.

The American Meteorological Society (AMS) is a member of the International Federation of Meteorological Societies (IFMS) as is AfMS. As part of our collaboration with the AfMS, Dr Kandis Boyd is leading the effort to build a strategic plan for the AfMS. As AMS Councilor and a member of the Executive Committee of AMS, Dr. Boyd brings her expertise and leadership experience at AMS to this effort. This plan will outline the long-term vision for the AfMS, establish priorities, and set measurable objectives, ensuring that all efforts are aligned with its core purpose. We wish you the best as you embark on this crucial undertaking.

We invite members of the AfMS to future AMS meetings. The following sessions at the upcoming AMS 105th Annual meeting may be of interest: African Climate Change and Variability, Air Quality, and Carbon Cycle Science of the African continent. We hope that collaboration between our members will further strengthen through interactions via such venues.

The first AfMS Conference is currently being planned for April 2025. It will provide a platform for knowledge exchange, networking, and collaboration among local and international experts, facilitating the sharing of best practices, innovative solutions, and cutting-edge research tailored to meet the unique challenges that Africa is facing. Hosting a conference on the continent encourages the participation of local professionals who might face barriers to attending international events elsewhere, thereby democratizing access to vital information and opportunities. Additionally, such conferences inspire and empower the next generation of African leaders, and researchers, fostering talent development and promoting homegrown solutions.



## Development of the European Meteorological Society (EMS) Prof. Liz Bentley, President EMS

As the African Regional Meteorological Society (AfMS) is a newly formed regional society, I wanted to share some of the experiences of the EMS as it celebrates its 25th anniversary in 2024.

The European Meteorological Society (EMS) was formally established in 1999 in Sweden, with the primary aim of connecting all the meteorological societies that existed in various countries across Europe, to learn from each other and address issues that require a pan-national approach. Today, the network consists of 38 Member Societies and 30 Associate Members.

The main activity of the EMS is its Annual Meeting and this was the first key objective, 25 years ago, to establish an EMS conference in the area of meteorology, climatology, and related disciplines to bring the entire community together: researchers, those working in the operational area and service providers. This year's Annual Meeting marks a milestone, as we expect more than 1000 participants at EMS2024 in Barcelona for the first time.

Another key activity that recognizes excellence, is the EMS Awards Programme which was set up as one of the first initiatives, to support young scientists, and honour outstanding achievements in meteorology. In 2008, the EMS Silver Medal was established to highlight personalities who have made crucial contributions to the development of meteorology in Europe.

At the opening session of EMS2024, we will celebrate the 25th Anniversary of the EMS, looking back at what we have achieved, what role the EMS plays today within the European meteorological community, and where its future lies. This year we will also celebrate the launch of an EMS Journal. Such a project has been discussed since the foundation of the EMS, and the project to launch a new journal is due to the vision, and commitment of Johannes Schmetz and Bert Holtslag. And here we are: JEMS!. Another new initiative is the launch of the EMS Webinar series in the 2024 spring, with five interesting topics and speakers. To learn more about the EMS and its 25th-anniversary celebration, please visit <https://www.emetsoc.org/quarter-of-a-century-the-ems25/>.



## Contribution from RMets Prof Liz Bentley, RMets Chief Executive

The Royal Meteorological Society (RMets) has a long history since it was founded in 1850. Over that time the RMets has managed to grow its membership and team of volunteers; introduce, and grow a secretariat; and increase the range of activities it delivers. However, its mission remains unchanged – to advance the understanding of weather and climate, and its applications, for the benefit of all. The RMets is a not-for-profit organisation that generates income from membership, partnerships, and its scientific publishing portfolio. Any surplus is put to delivering on its many charitable activities, through 'formal education' – schools, teachers, education bodies, examination boards, and through 'informal education' to a wider general public audience. Next year in 2025, RMets will celebrate its 175th anniversary, which offers an opportunity to reflect on its many achievements and to look forward to the future.

The RMets is a permanent member of the EMS and a member of the IFMS and AfMS. We recognise the importance of national, regional, and global member societies in bringing together people and meteorological societies. We all strongly rely on volunteers, and couldn't achieve the important work that we do without them. We can share knowledge and experiences to support each other and work together to achieve more and have a greater impact. The RMets has volunteers supporting the AfMS. It has also provided a financial contribution towards the AfMS conference – and we look forward to continuing our support over the coming years.

## **IMPORTANT FEATURES OBSERVED IN SATELLITE-DERIVED PRODUCTS ASSOCIATED WITH VERY HEAVY RAINFALL EVENT OF DUBAI ON 16 APRIL, 2024**

R.C. BHATIA, Retired Additional Director General, India Meteorological Department, Delhi (India)

### **1. Heavy Rainfall Event in Dubai**

An unprecedented heavy rainfall event was reported in Dubai (UAE) in association with a western disturbance on 16 April 2024. This very high-impact weather event affected Dubai, particularly, the aviation and surface transport infrastructure. Very large areas of the city were flooded. The drainage system of the city proved to be inadequate to handle this rain storm with abnormally high-intensity rain rates. An analysis of the synoptic situation associated with this system has been done using satellite-derived products. This article brings out important features seen in various satellite products for this important event.

### **2. Synoptic Situation**

According to the "All India Daily Weather Bulletin" issued by the India Meteorological Department (IMD) on 16 April 2024, a fresh Western Disturbance was expected to influence Northwest India from 18 April 2024. Since it was expected to come from the west, an examination of the satellite-derived upper-level winds of 16 April 2024 (03Z) showed that this disturbance lies as a cyclonic circulation over western parts of Iran and adjoining areas of Saudi Arabia. Such systems generally move eastwards and affect the weather over Western Himalayan Region after about 2 days. Therefore, some weather could also be expected over Saudi Arabia and adjoining areas of UAE on 16 April 2024, the day system was located over these areas.

On 17 April 2024 (03Z) this Western Disturbance lay as a cyclonic circulation over Iran and the neighbourhood with associated circulation between 5.8 and 9.6 KM above mean sea levels. A day before, it was located over central parts of Saudi Arabia and was moving north-eastwards. Heavy rainfall event in Dubai on 16 April 2024 referred to above, occurred in association with this system.

### **3. Analysis of satellite derived products**

The 24-hour animation sequence of the Total Precipitable Water (TPW) product (FIGURE 1) ending at 00Z of 17 April 24 shows a large incursion of highly moist air over the UAE area from a Southerly direction. The animation sequence clearly brings out a low-level circulation with centre located right over UAE which resulted in heavy rains over the area on 16 April 2024 particularly during the night. Airmass product imagery (Figure-4) of 16 April 24 (1700 Z) obtained from the METEOSAT-9 satellite located over the Indian Ocean Data Coverage (IODC) area shows the development of convective clouds over the UAE area. Very dense convective clouds extending southward from the UAE can also be seen. The entire system moved eastwards on 16 April 24 giving rise to extremely heavy rain over the localized areas. Upper-Level divergence product (Figure-2) of Wisconsin University, USA derived from METEOSAT-9 data of 16 April 24 at 03Z shows very high values near the UAE area indicating that maintenance of high convective activity over the area continued for a long time. Low-level convergence product for the same day and time also shows high values of convergence over the area. It is also seen from the 850 hPa relative vorticity product of 15 April 2024 (12 Z) that a low-level vorticity centre developed over the central parts of Saudi Arabia. It moved North-eastwards during the next day giving rise to heavy rains over the UAE on 16 April 24. Low-level cloud motion vectors derived by the Wisconsin University, USA on 16 April 2024 at 03Z with IR imagery in the background, are shown in Figure-3. This product also shows highly convective clouds over the UAE area.

### **4. Summary**

The unprecedented heavy rainfall event that occurred in Dubai on 16 April 2024 was associated with an active western disturbance over Iran. The low-level circulation which produced heavy rainfall could be clearly seen in the 24-hour animation sequence of the TPW product as explained in para 4 above. Satellite-derived products were found to be extremely useful for analysis of the synoptic situation associated with the event.

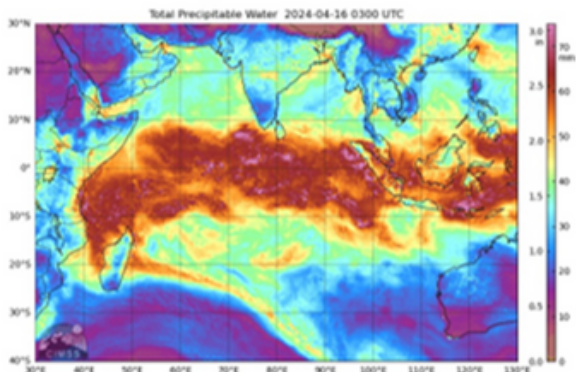


FIGURE 1: Total Precipitable Water imagery of 16 APRIL 2024 at 0300Z over Indian Ocean region showing low-level moisture incursion over the UAE area.

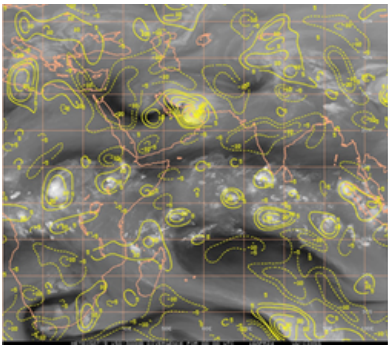


FIGURE 2:Upper- Level Divergence product of 16 APRIL,2024 at 03Z derived by the University of Wisconsin, USA using METEOSAT-9 data over Indian Ocean Data Coverage (IODC) area. It shows very high values near UAE with very tight contours indicating large gradients.

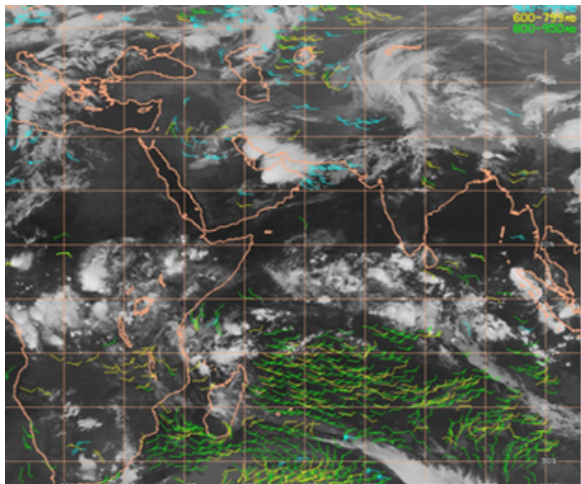


FIGURE 3: Low-level cloud motion vectors product of Wisconsin University, USA for the same date and time as in Fig.2 with IR imagery in the background showing convective clouds with cold cloud tops

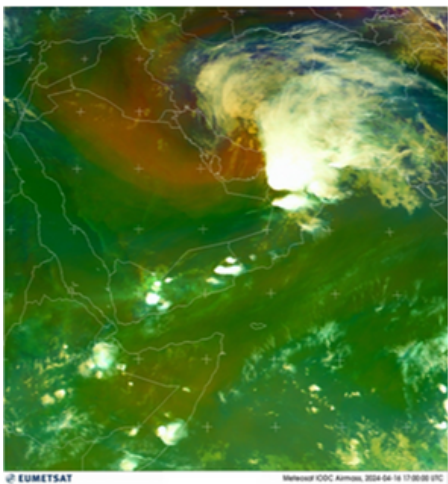


FIGURE 4: Air Mass product over Middle East sector derived with METEOSAT-9 data at EUMETSAT on 16 April 2024 at 1700 hrs UTC. It shows deep convective clouds over UAE area and also extending southwards from UAE.

## **ETHIOPIAN METEOROLOGICAL SOCIETY'S (EtMS) ACHIEVEMENTS AND CHALLENGES SINCE ITS ESTABLISHMENT IN 2007.**

Workneh Degefu, Manager & Executive Secretary of EtMS, Vice Board Chair, AfMS

### **1. The aims of the Society**

The following are the aims of the EtMS are to:

- Contribute to the improvement and modernization of the science of meteorology, hydrology and atmospheric sciences in Ethiopia;
- Promote research in the field of meteorology and allied sciences;
- Carry out capacity building activities so that its members are armed with the state-of-the-art knowledge in their professional field;
- Ensure that meteorology and allied sciences are applied for the economic development of Ethiopia;
- Issue scientific Journal and newsletter periodically;
- Create awareness among the user community and the public at large in Ethiopia regarding the benefit of the science of meteorology; and
- Promote close collaboration among its members.

### **2. The Society has carried out the following activities since its establishment in 2007**

- Held 13 General Assemblies.
- Held 3 major Conferences on the following themes:
  - Climate Change and Variability
  - Climate Change and the Aviation Industry
  - The ENSO Phenomenon
- Organized 3 successive workshops on behalf of the University of Nebraska, USA, on the theme "Seasonal Prediction of Hydro-Climatic Extremes in the Greater Horn of Africa (GHA), Participatory Research and Project Workshop".
- Held several workshops in conjunction with its annual General Assembly with a view to provide opportunities to the EtMS members to present their research work at these workshops.
- Awarded over 20 scholarships to several members to enable them complete their thesis in fulfillment of the requirement for obtaining their postgraduate degrees.
- Established 2 Research Awards: One, in the name of Bekelech Dadi (mother to EtMS member, Dr. Mengistu Wolde) to be awarded to EtMS women members, Second, in the name of Workneh Degefu (Former General Manager of the Ethiopian National Meteorological Agency now Institute) and Family, to be awarded to EtMS members researchers. So far 8 EtMS members have benefited from both Awards.
- Organized 7 excursions around historical and educational sites in Ethiopia to give opportunities to EtMS members to have social interactions.
- Published 4 Scientific Journals
- Published 18 Newsletters
- Published 3 conference proceedings
- Published a document entitled "Guide for Users of Meteorological Information" in collaboration with the National Meteorological Agency and Christian Aid.

### **3. Other Regional and international activities**

- EtMS is a member of the International Forum of Meteorological Societies (IFMS) of the World.

EtMS is a Council Member of IFMS. EtMS has attended 8 General Assembly meetings of IFMS since its establishment in 2010. It also participated in several Council meetings of IFMS.

IFMS initiated the establishment of the African Meteorological Society (AfMS). The headquarters is now in Addis Ababa, Ethiopia, collocated with the WMO Regional office for Africa. It is registered and a certificate of establishment was issued by the Ethiopian Authority on Civil Society Organizations and become operational. EtMS played a major role in the establishment process and in bringing the Office to Addis Ababa, Ethiopia, to work closely with the WMO Regional Office for Africa.

### **4. EtMS has faced the following main challenges**

- Resource/financial, office space and equipment limitations.
- Membership retention and attraction of new members are problems.
- Getting volunteers who can take up the various administrative and technical tasks of the Society.
- Limitations to carry out capacity building activities through scholarship awards and provision of short-term trainings to members; assisting members to attend training seminars and workshops
- Coordination, cooperation and interaction limitations with government institutions working in the area of meteorology, climate change and environment.



### 5. Comments by Dr. Harinder Ahluwalia, President of IFMS

This article has clearly illustrated the very important achievements for the Ethiopian Meteorological Society (EtMS) for which we congratulate them. These achievements have been made despite the challenges listed in section 4 above. EtMS is moving forward due to the sheer courage and hard work of Workneh Degefu and his team.

We request other African National Meteorological Societies to showcase their achievements and challenges they face. This will provide IFMS with the ammunition to convince donors to provide funding to these societies which are working so hard through volunteerism to create capacity in their countries to handle Climate Change.



**Call for Papers**

**Joint AfMS-WMO Conference  
in Addis Ababa – April 27-30, 2025**

**Please submit Papers  
For the Parallel Sessions.**

**(For more details please visit AfMS Website)**

**[www.africanmetsociety.org](http://www.africanmetsociety.org)**

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## **Volunteerism from African Meteorological Professionals**

By: Kidanu Mehiretu

African countries are fortunate to have skilled professionals engaged in meteorological undertakings in various areas of specialization. The leading governmental institutions are actively doing their best to provide meteorological and hydrometeorological services to those in need. This task definitely requires well-qualified meteorological personnel in appreciable numbers. This capacity is, however, at varying levels of development in African countries. Having recognized African meteorological service rendering institutions at different levels of status in this undertaking, it is evident that there may be gaps observed in rendering the required meteorological services at the community level among others. This gap does actually need someone to take care of, apart from the National Meteorological and Hydrological Services (NMHSs) establishments. NMHSs need this assistance by way of lending a professional helping hand to the national establishment. Here comes the role to be played by National Meteorological Societies, NMSs, which have by now succeeded in some countries in establishing and getting a legally realized African Meteorological Society, AfMS. This has been achieved through the cooperation of the International Forum of Meteorological Societies, IFMS, and others. The AfMS has been registered and accorded a legal status by Proclamation No. 1113/2019 of the Ethiopian Association of Civil Societies Organization since the seat of AfMS has been agreed upon by the Board of AfMS on Feb. 10, 2021 to be in Addis Ababa, Ethiopia.

AfMS has a number of tasks to achieve in making advances through furthering voluntarism by meteorological professionals, be they active or retired. Voluntarism requires professional affection and devotion to perform given tasks and responsibilities to bring about marked and rudimentary milestones that can benefit the target population or sampling thereof through generating awareness creation, say in climate change and its related impacts. The community at large is the target of this endeavour which needs a strategy to raise the capacity of those who are involved in teaching tasks at schools, colleges, universities, and others. This is a task which requires the involvement of all those who have the right qualifications as active or retired meteorological professionals. Each African country has invested a lot in shaping these scholars and such an investment will receive its reward once it gets the opportunity to pass knowledge and trickle it down to the grass root level for bringing about sustained capacity-building outcomes. Such a noble idea is to be borne in the minds of professionals engaged in the science of meteorology and allied sciences from volunteering perspective which may require knowledge transfer and a little bit of devotion to pass it on to those who lack it in one way or another.

Hence, those who are involved with this noble mission are kindly reminded to be on board in line with calls made from AfMS for possible active participation and willingness to bear any sacrifice that may be paid in its realization.

## ACRONYMS

|         |   |
|---------|---|
| AfMS    | African Meteorological Society  |
| AGU     | American Geophysical Union  |
| AMS     | American Meteorological Societies   |
| AMOS    | Australian Meteorological and Oceanographic Society                         |
| CMOS    | Canadian Meteorological and Oceanographic Society                           |
| CMS     | Chinese Meteorological Society  |
| CSPOC   | Conference Scientific Program Organizing Committee                          |
| DC      | Developing Country  |
| D-FOA   | Diaspora and Friends of Africa who are not Africans but want to help Africa |
| EMS     | European Meteorological Society   |
| E&T     | Education and Training  |
| GHG     | Green House Gas   |
| HMEI    | Hydro-Meteorological Equipment Industry                                     |
| IAUC    | International Association of Urban Climate                                  |
| IFMS    | International Forum of Meteorological Societies.                            |
| IMS     | Indian Meteorological Society   |
| IPCC    | International Panel on Climate Change                                       |
| ISB     | International Society of Bio-meteorologists                                 |
| LDC     | Least Developed Country   |
| MH-EWS  | Multi-Hazard Early Warning System   |
| MOU     | Memorandum of Understanding   |
| MSJ     | Meteorological Society of Japan   |
| NL      | Newsletter  |
| NMHS    | National Meteorological and Hydrological Service                            |
| NMSoc   | National Meteorological Society   |
| RMetS   | Royal Meteorological Society - UK   |
| S&T     | Science and Technology  |
| TTP:    | Teacher Training Program  |
| UAE     | United Arab Emirate   |
| UNCC-AA | United Nation Conference Centre – Addis Ababa                               |
| WMO     | World Meteorological Organization   |
| WMO-RA1 | Region 1 of WMO   |



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