



An Introduction to the International Forum of Meteorological Societies (IFMS)

Executive Summary

Every country needs capability to accurately forecast weather to improve its economy and to generate Early Warnings against any disastrous weather conditions caused by weather phenomena including those due to Global Warming and Climate Change (**GW&CC**). This requires an infrastructure to measure weather parameters, processing systems to process the collected data and capacity in terms of knowledge and expertise to do high quality weather forecasting which many Least Developed Countries (**LDCs**) and many Developing Countries (**DCs**) do not have. In addition, Institutional and Societal capacity are very important to handle different types of situations caused by weather related emergencies.

Normally, building the above capacity is the job of National Meteorological Services (**NMS**) whose activities are assisted/coordinated by the World Meteorological Organization (**WMO**). The World Bank Group (**WBG**) is another important organization assisting Least Developed and Developing Countries in creating infrastructure and capacity. However, all these organizations are employee-based, hence, with limited resources they can achieve only limited progress. Therefore, it is important to supplement their efforts with those of volunteer-based organizations. Many active professionals, retired professionals and students are interested in doing volunteer work which provides the satisfaction of contributing to the society at large, not for money, but for generosity of their hearts. National Meteorological Societies (**NMSocs**) which can have membership from Public, Private and Academic (**PPA**) Sectors, with strong collaboration between these sectors, can provide such an opportunity of doing volunteer work. They are the home of PPA Collaboration which is being promoted strongly by WMO through its Open Consultative Platform (**OCP**) Initiative and WBG through GWE Forum (**GWEF**) Initiative.

In order to discuss regional issues and create collaboration between regional NMSocs, it is important to have Regional Meteorological Societies (**RMSs**) in each continent. European Meteorological Society (**EMS**) is an important example which has strengthened European NMSoc through collaboration in Science and Technology (**S&T**) and Education and Training (**E&T**) through annual Conferences and many other capacity building programs it carries out. We have another such RMS known as Federation of Latin American and Iberian Meteorological Societies (**FLISMET**) which unites the Spanish Speaking countries to collaborate with each other. Efforts are being made to strengthen this RMS to benefit Spanish speaking countries.

In order to leverage the strengths of developed societies, we need to put all NMSocs and RMSs of the world together to cooperate and share responsibilities for S&T and E&T Collaboration, creating NMSocs in all countries and RMSs in all continents, sharing best practices, providing information about various programs (e.g., OCP and GWEF, etc.), providing guidance for Accreditation and Certification, creating relationship with **WMO**, **WB** and **HMEI** (Hydro-Met Equipment Industry), etc. The International Forum of Meteorological Societies (**IFMS**) was created to fulfill that role. IFMS' role is to **make the whole much bigger than the sum of its parts**. IFMS can also assist WMO in organizing World Weather Open Science Conference (**WWOSC**) at

least every third year. In addition, being a volunteer-based organization with only objective to build capacity around the world, IFMS might be better suited to convince various governments to invest more in infrastructure and capacity building.

The continent of Africa is in dire need of assistance in strengthening its infrastructure and knowledge-base. Currently, there are 10 NMSocs in a continent of 54 countries 33 of which are in the LDC category. We are encouraging and assisting all other countries to create an NMSoc. In order to unite all these NMSocs, we have created an African Meteorological Society (**AfMS**) which was the dream of many African professionals. We will soon be inaugurating it and operationalizing it to become a major player in creating capacity in African Nations through its various activities. IFMS plans to take all steps to strengthen AfMS. We plan to also create an Asian Meteorological Society as well as South Pacific Meteorological Society as soon as possible.

Since by investing one dollar in infrastructure and capacity building can provide us multifold benefits, it is important that we spend that dollar before we lose multiple times more due to unpredicted or wrongly predicted disasters. Considering billions of dollars of property and multiple lives are being lost due to improperly managed disasters, it is our duty to make that investment to build infrastructure and create required capacity.

In order to assist the NMSs and WMO as well as WBG, we need NMSoc in each country to work with RMSs and IFMS to achieve this objective. There are 193 members of WMO having a National Meteorological Service. However, there are only approximately 72 NMSocs. Knowing the importance of NMSocs in creating National Collaboration and capacity, we are working hard to create an NMSoc in each nation – no matter how big or small. The fact that even the smallest society with a few members can take advantage of the activities of the RMSs and IFMS as well as other sister NMSocs, it makes a lot of sense to have one in each country. An interesting example of this statement is Andorra which with a population of approximately 75,000, has an NMSoc with around 15 members and is taking benefit of not only national collaboration but also through the activities of EMS. Another example is Iceland which with a population of approximately 350,000 people have an NMSoc with 25 members who are taking advantage of the EMS.

Properly financed and managed, the NMSocs, RMSs and IFMS will greatly assist WMO and WBG in strengthening their effort to create a great capacity around the world to combat the disasters caused by Global Warming and Climate Change (**GW&CC**). We would even state that it is the most optimum investment governments can make to create capacity against the disastrous impacts of Global Warming and Climate Change.

We urge WMO and WBG, the main beneficiaries of our activities, and Aid Agencies, Governments, Philanthropic Organizations and individuals to help finance IFMS which in turn can finance well defined projects for NMSocs and RMSs. In addition, we hope that a lot of people offer their volunteer services to create a lot of capacity to improve our economies and fight against the disastrous effects of GW&CC.

Let's all do our best to strengthen IFMS. RMSs and NMSocs!

1. Background

Every country needs capability to accurately forecast weather to improve its economy and to generate Early Warnings against any disastrous weather conditions caused by weather phenomena including by Global Warming and Climate Change (**GW&CC**). This requires an infrastructure to measure weather parameters and Processing Capacity and knowledge to do high quality weather forecasting.

There are many countries in the world especially the least developed and many developing countries which do not have much infrastructure and knowledge-base. In addition, all countries need Institutional and Societal capacity so that there are well defined procedures to handle different types of situations caused by weather related emergencies.

2. Why National Meteorological Society

Normally, building the above capacity is the job of National Meteorological Services (**NMS**) whose activities are coordinated/assisted by the World Meteorological Organization (**WMO**), a component of the United Nations. The World Bank Group (**WBG**) is another important organization assisting Least Developed and Developing Countries in creating infrastructure and capacity.

All above organizations are employee-based, hence, with limited resources they can achieve only limited progress. Therefore, it is important to supplement their efforts with those of volunteer-based organizations. Many active professionals, retired professionals and students are interested in doing volunteer work which provides the satisfaction of contributing to the society at large, not for money, but for generosity of their hearts. In addition, such volunteer work also provides some very important networking and learning opportunities to all professionals. National Meteorological Societies (**NMSocs**) are meant to provide those opportunities to professionals to achieve those goals. In addition, those making exceptional contribution could get recognition which can help their careers.

The importance of the NMSocs in the development of the profession and the professionals cannot be overstated. As proven in a subsequent section of this document, every country, no matter how big or small, can and should have an NMSoc so that its members can take advantage of the activities of their Society.

3. Why Regional Meteorological Societies (RMSs)

In addition, given that many of the opportunities and problems in a given Region or Continent can be shared by NMSocs in that region, it is also important to have Regional Meteorological Societies (**RMSs**) or even sub-regional societies or associations in each continent to act as a glue between NMSocs in that Region or sub-region. Currently there are three RMSs: *European Met Society (EMS)* www.emetsoc.org, *Federation of Latin American and Iberian Met Societies (FLISMET)* www.flismet.webs.com and newly created *African Met Society (AfMS)*. Although there is some cooperation between NMSocs of Japan, China, South Korea, and Hong Kong and in addition, there is a South Asian Meteorological Society (**SAMA**) in Asia, which are active, we believe that it would be important to have an Asian Meteorological Society (**AsMS**) so that the Least Developed Countries (**LDCs**) and Developing Countries (**DCs**) in that continent can take advantage of the stronger societies in Asia to strengthen themselves.

Since only NMSocs (not individuals) can be members of RMSs and IFMS, it is important that all nations have an NMSoc. There are 193 members of WMO, but there are only approximately 72 NMSocs.

Therefore, there is a scope for creating approximately 121 additional NMSocs to create capacity in those nations.

4. Why International Forum of Meteorological Societies (IFMS) – www.ifms.org

In order to enhance the effectiveness of all societies and to assist the NMSocs in the Least Developed and Developing Countries in capacity building, it is important to have a body to create international collaboration to “*make the whole much bigger than the sum of its parts*”. Hence the need for the International Forum of Meteorological Societies (IFMS) which was conceived in 2010 but registered and operationalized in 2015. The International Forum of Meteorological Societies (www.ifms.org) was created to unite the National Meteorological (and Hydrological) Societies (NMSocs) of the world in the same manner as the World Meteorological Organization (WMO) is uniting the National Meteorological (and Hydrological) Services (NMS) of the world. The following figure shows the role and value of each entity: WMO, IFMS, HMEI and WBG.



IFMS is working hard to create NMSocs and RMSs in countries and continents, respectively, where they do not exist. IFMS recently assisted African nations to create the African Meteorological Society (AfMS) to fulfill the dream of African professionals in meteorology. We are also assisting Cameroon, Zimbabwe, Zambia and Sierra Leone in creating their NMSocs. We are urging other countries, which do not have an NMSocs, to have one. IFMS will strongly help in this process of creating NMSoc.

5. IFMS Organization

The supreme Committee of IFMS is the General Body which consists of a representative from each of the member Societies. The operations of IFMS are run by a Council which consists of an Executive Committee (**President, Vice-President Operations, Vice President Finance, General Secretary and Treasurer**) and **Regional Members** from each of the six Regions.

For the sake of expediency, we have defined our regions to match with those of WMO. The regions are as follows: R1 (Africa), R2 (Asia), R3 (South America), R4 (North America, Caribbeans and Central America), R5 (South Pacific countries) and R6 (Europe).

The current (2022-2024) IFMS Council is presented in the following picture.



6. IFMS Value Proposition

The Value Propositions of IFMS along with their **Implementation Committees** are as follows:

1. **Committee C1: Creating S&T cooperation between NMSocs and their members to build capacity.**
2. **Committee C2: Creating and strengthening NMSocs and RMSs so that they can assist in the development of professionals in their countries and continent.**
3. **Committee C3: Assisting in creating capacity through Education and Training**

We have various other activities in support of our core Value Proposition stated above, which are being handled by their corresponding Committees.

- C4: Creating Collaboration with Regional Societies** (e.g., EMS, FLISMET, AfMS, soon to be created Asian Met Society, etc.), to strengthen them and take their assistance in strengthening NMSocs within their Region.
- C5:** Developing cost-effective **Communications Channels** including Website and Newsletter.
- C6: Collaboration with WMO and WBG** to assist in their Initiatives such as Global Campus Initiative (**GCI**), PPA Collaboration Initiatives (**OCP (WMO)** and **GWEF (World Bank)**), etc.
- C7: Finance Committee** for organizing our finances for all our activities.
- C8:** Assisting interested Societies in implementing their **Accreditation/Certification and related Training (ACT)** Program.
- C9: Sharing Best Practices** with each other e.g., Best Practice to create a Society, to run a Conference, etc.

- C10: Awards Committee** - to honor those who very strongly assist us in strengthening IFMS or excel in conducting S&T and/or promoting S&T collaboration internationally, etc.
- C11:** Keeping IFMS membership informed about **WMO and WB-GFDRR PPA Collaboration** Initiatives.
- C12: Organizing Meetings and Conferences.** For example, making sure that our International Global Meetings provide maximum benefits to our members. We also plan to assist WMO and Regional or strong National Hydromet Societies in organizing World Weather Open Science Conferences (**WWOSC**) on a regular basis.
- C13: Promoting infrastructure and Capacity Building** by educating Governments and Public to convince the Governments to provide required funding support for weather and water services capacity as well as for infrastructure, as appropriate.

7. Leaders/Chairs of Implementation Committees

The following persons are responsible for implementing our Core Value Proposition shown in the middle of the following Diagram in blue color: Buruhani Nyenzi, Ammar Gaber and Workneh Degefu.

Other Committees are there for supporting the implementation of our main Value Proposition and strengthening the Member Societies.

The first priority is given to the Core Committees C1, C2 and C3. Other Committee Chairs work in the background and are always prepared to assist above core committees whenever required.



8. Role of Various Societies

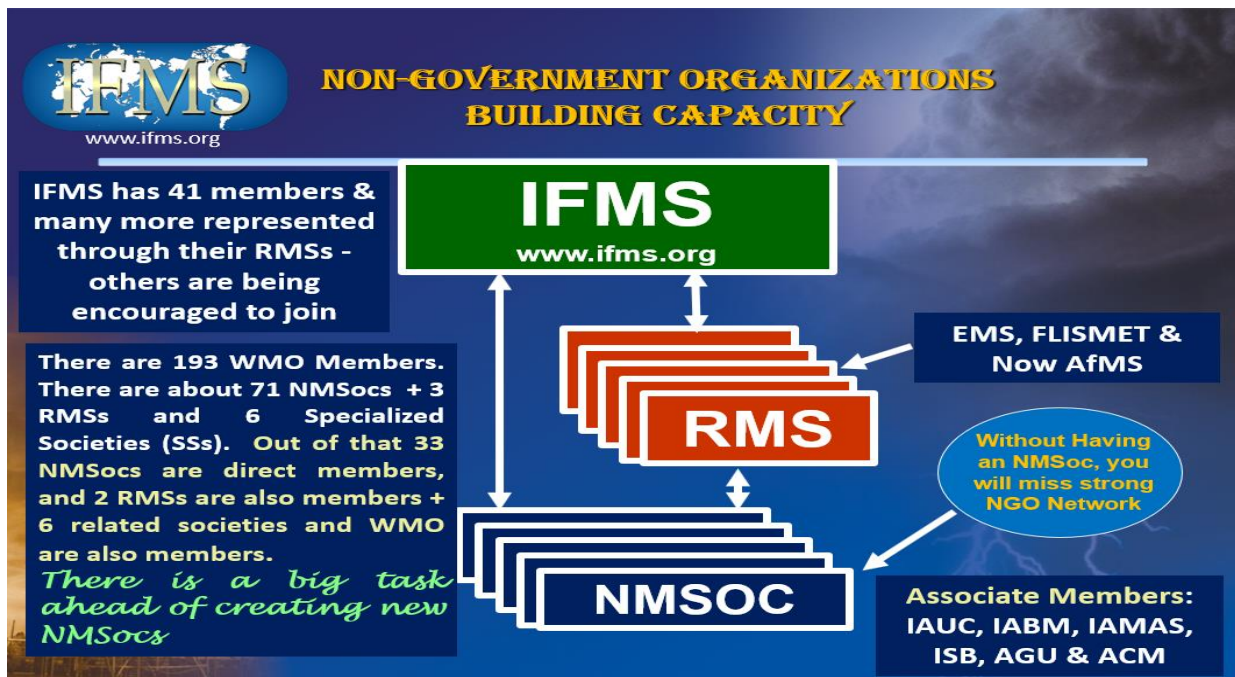
As discussed above, there are three levels of Professional Societies in the field of Meteorology and Hydrology:

1. National Meteorological Societies (**NMSocs**) to create National collaborations and Capacity
2. Regional Meteorological Societies (**RMSs**) to create regional collaborations and Capacity
3. International Forum of Meteorological Societies (**IFMS**) - to create international collaborations.

In addition, there are 6 Associate Member Societies which are also dealing with different aspects of Meteorology and can be interesting partners in solving many issues common between us:

- IAUC:** International Association of Urban Meteorologists
IABM: International Association of Broadcast Meteorologists
IAMAS: International Association of Meteorology and Atmospheric Science
ISB: International Society of Bio-meteorology
AGU: American Geophysical Union
ACM: Association of Certified Meteorologists.

The following figure shows the relationship of all the above Societies.



9. Finances

Although IFMS is a volunteer-based organization, it does need some finances for the following activities:

1. Financial assistance to societies in the Least Developed Countries (**LDCs**) and Developing Countries (**DCs**) to arrange local Educational and Training (**E&T**) Programs. This assistance will be on a Project-by-Project basis. The requesting society will define a project which will be evaluated by IFMS, and if found meaningful and useful for **capacity building**, IFMS will finance it partially or fully depending upon the circumstances.
2. Seed money for creating new societies in the Least Developed and Developing Countries.

3. Publication of the Newsletter, Maintenance of Website and payment for Conferencing facilities.
4. In order to ensure continuity, we need to have a small Secretariat (with about 3 persons paid on honorarium basis). The operational expenses of the Secretariat and some travel expenses of the Secretariat personnel and Council Members are required,
5. Travel expenses of delegates of LDCs who cannot afford to pay for the travel for their participation in very important capacity building meetings and conferences.
6. Out of pocket expenses for volunteers.
7. Running Training Programs (through Webinars) and in person and also especially during our IFMS Global Meetings (IGM)) & Networking events and filling any gaps in Training Programs.

Most of the NMSocs have their own financial issues. Therefore, IFMS does not oblige its members to pay a fee because our objective is to help all NMSocs/RMSs irrespective of their financial situation. However, we do recommend our members to contribute financially, if they are financially capable. Up to now we have been working hard to show value of IFMS and not soliciting finances from external sources. In this term starting 2022, we are in the process of organizing our finances.

Currently, thanks to the generosity of AMS, whenever we need money, they have obliged us. However, IFMS must find its own sources of funding.

We are also thankful to Council Members whose dedicated work helps make IFMS a key organization in building capacity around the world – especially in the LDCs and DCs.

10. Sources of Funding

Since our major objective is to assist WMO and WBG in developing capacity around the world, between them, they should assist IFMS in the most basic funding which is around \$100,000 for meeting minimal expenses. We should have regular interaction to ensure that all resources are being used meaningfully to develop capacity which will take these two organizations a lot of effort and much more money but can be done economically by IFMS and its members because these are all volunteer-based organizations.

More additional funding we have, more activities we can do to build capacity. Therefore, we plan to approach Aid Agencies of affluent countries and philanthropic organizations to request funding.

11. Current Achievements of IFMS

1. We are an incorporated and Non-Profit Charitable registered organization in Washington DC.
2. We have a Council with Executive Committee Members and Regional Council Members.
3. We have a well-defined Value Proposition.
4. We have well defined Committees with Plans to implement our Value Proposition and related activities. ***This is our way of distributing work and related responsibility.***
5. We have a Website and Newsletter which will be improved as funding becomes available.
6. We are recruiting existing societies and helping create new ones – they need finances which is an important component, we are trying to deal with.
7. We are trying to strengthen Regional Societies because we understand their value to deal with regional issues and the assistance, they can provide to IFMS in dealing with the regions e.g., language issues, local training needs, etc.
8. Working on creating meaningful relationship with specialized Societies (IABM, IAUC, ISB, ACM, etc.) as well as broader Societies (AGU, IAMAS).
9. We have created & are always enhancing our Communication Channels which include: Newsletter, Website and Social Media usage. We need to work harder to make them more effective.

10. S&T Collaboration Infrastructure is there for member Societies to use. NMSocs and their members are encouraged to make use of this Collaboration Infrastructure.
11. Implementation assistance for Accreditation / Certification and related training is available for any interested society.
12. Best Practices are being gathered and centralized - new ones are being created – a very important new one on “Creation & Maintaining of Societies” has been developed and is available on our website.
13. We are working on Training aspect quite strongly and plan to assist the WMO’s Global Campus Initiative and UCAR-COMET’s programs.
14. We are working on creating Centralized inventory/repository of all available Hydro-Met related courses and making them available on IFMS Website.
15. Doing gap analysis to see if more tailored courses are required which could be developed through cooperation between Societies.
16. Working on creating relationship with WMO, WBG, HMEI, etc.
17. Keeping our members informed about PPA Collaboration efforts of WMO (OCP) and WBG (GWEF) through articles in our Newsletters and Webinars.
18. We have an MOU of cooperation with WMO to be able to participate in their meetings as an Observer & for other cooperation. We hope to have a similar MOU with WBG soon.
19. We have established a strong base and path to follow for our development – and with Volunteers & Finances we are poised to go very far and become an indispensable member of GWE.
20. Our most recent success is the assistance we provided in creating African Meteorological Society which is currently being registered and will be inaugurated before the end of June, 2022.
21. We are assisting many other countries in creating NMSoc in their country e.g., Sierra Leone, Cameroon, Zimbabwe, Zambia, etc.
22. We have conducted 7 IFMS Global Meetings/Conferences. The last one was conducted in 5 Sessions, one per week from November 17, 2021 to December 15, 2021. It covered Global Warming and Climate Change (**Public Lecture on GW&CC**) and Multi-Hazard Early Warning Systems (**MH-EWS**) with presentations and Panel Discussions.
- 23. Our most important need at this time is financing on which we are working this year (2022).**
24. Most importantly, we know where we started from and where we are going.

12. Conclusions

The mandate of IFMS is to assist WMO and WBG to create capacity around the world through cooperation between National Meteorological Societies, Regional Meteorological Societies and IFMS’ own initiatives. ***IFMS is expected to unify the scattered resources (NMSoc) and make the whole much greater than the sum of its parts.***

The Core Value Propositions of IFMS are creating S&T cooperation, capacity building through Education and Training – especially in Least Developed and Developing countries and our endeavor to create a National Meteorological Society in all countries which do not have one yet. We also are creating Regional Meteorological Societies – African Meteorological Society being the prime example. In addition to Core Committees, we also have supporting committees to make the Core Committees more effective. We have operated without organizing strong financing up to now. We plan to work hard to arrange financing during this term (starting January 2022) of the Council. Any finances contributed to IFMS will go much farther because all our core activities are done by volunteers.

We hope to get a lot of volunteers and finances to make a very big contribution to the Global Weather Enterprise and minimize the disastrous effects of Global Warming and Climate Change on all nations including Least Developed and Developing ones.