WMO SUBMISSION TO NAIROBI WORK PROGRAMM IN THE AREAS OF WATER AND HEALTH

August 2014

1 WATER

1.1 Associated Programme on Flood Management (APFM)

The Associated Programme on Flood Management (APFM) is a joint initiative of the World Meteorological Organization and the Global Water Partnership. The APFM facilitates the dialogue to governmental agencies and provides a platform for guidance on flood management policy, strategy and institutional development. It promotes flood risk awareness, provides technical information with a multi-disciplinary approach and supports actions towards implementation of the Integrated Flood Management (IFM) concept.

More specifically, the APFM's goals are to:

- Promote the principles of Integrated Flood Management (IFM)
- Help assimilate IFM within the overall Integrated Water Resources Management
- Identify gaps in present flood management practices, and to stimulate partners to meet critical needs within their available human and financial resources
- Support IFM actions at all levels: national, regional, local and river basin-wide
- Provide a platform for a common strategic vision on IFM issues, and to promote the implementation of effective policies and strategies worldwide
- Promote awareness about flood management issues, build political commitment and trigger action at all levels
- Provide advice and relevant information to institutions and decision-makers on flood management issues.

In terms of practical activities, APFM is operating in three major fields:

1) Compilation of guidance and advisory materials;

2) Capacity building on IFM, and creation of a network on IFM; and

3) Development of pilot projects and support in the implementation of National Strategies for IFM.

The APFM activities are also reflected in the structure and functioning of its IFM HelpDesk, a facility that provides guidance on flood management policy, strategy, and institutional development for countries that want to adopt the IFM concept. Users have the possibility either to request custom-made technical support through the Get Help function or to find flood management solutions by themselves using the literature in the Help Yourself section.

Although freely accessible online, the Helpdesk has been especially conceived for some categories of audience, in particular government agencies in charge of flood management, river basin organizations, bi- and multilateral development agencies in the field of water resources

and disaster management, community-based organizations and NGOs engaged in flood preparedness, universities and other capacity building institutions for the water and disaster management sectors.

The good performance of the HelpDesk is made possible by the active support of the Support Base Partners (SBPs), a network of professional institutions and organizations contributing their expertise and technical backup in various areas of activity. These range from advice and advocacy in policy formulation as well as technical issues to facilitation of training courses on IFM to development of tools and capacity building materials.

1.2 Guidance Materials

In terms of guidance materials, APFM has published an IFM Policy Series and a Flood Management Tool Series. This last one constitutes an insight on various specific aspects of flood management targeted to flood management practitioners to help them gain quick access to relevant technical guidance. These Tools incorporate various aspects within the framework of an integrated approach to flood management. The compilation of the tools is an ongoing process and as such these tools should be considered as living documents being updated periodically.

1.3 Capacity Building

The Associated Programme on Flood Management has developed a comprehensive training curriculum on flood management. Over the past years, several training workshops were conducted in various countries. In this regards, APFM is supported not only by the World Meteorological Organization and the Global Water Partnership, but also through contributions from its Support Base Partners, i.e. a network of external institutions supporting the activities of the IFM HelpDesk. Trainings are organized on a demand-driven basis, and individually tailored to the requesting parties and governments. Scope, duration and topics vary but can generally be divided into the following:

- Short vocational trainings or workshops (3-5 days) on the principles and aspects of Integrated Flood Management for policy makers, development planners, and water and disaster management professionals with a priority on the national and basin level;
- Training of trainers workshops (1-5 days) for capacity building institutions targeting vocational training of relevant professionals; and
- National workshops analyzing the current flood management situation and developing a strategic national framework in accordance with the Integrated Flood Management concept.

1.4 Pilot Projects

A series of pilot projects are under implementation together with GWP's Regional and Country Water Partnerships to test and demonstrate the applicability of the principles of Integrated Flood Management. Experiences and lessons learned will be used to prepare detailed plans for regional projects.

1.4.1 Community-based approaches to Flood Management

Building on the successful implementation in earlier APFM pilot projects in Bangladesh, India and Nepal, the experiences gained have been extended in Southeast Asia. Implementation is being carried out in Thailand and Lao PDR in close cooperation with the Asian Disaster Preparedness Centre (ADPC). The aim of this pilot project is to increase flood disaster resilience of flood prone communities in selected vulnerable areas where riverine and flash floods pose a prominent risk. Following the concept of integrated flood management, the project seeks to improve self-help capabilities to reduce the negative impacts of floods, while optimizing the positive effects of floods. The project commenced in 2013 and will be conducted over a period of 30 months.

1.4.2 Integrated Coastal Flood Management

Coastal flood management is seen in the context of flood caused by storm surges and involves early warning as well as long management and flood preparedness. A pilot project is being implemented in the framework of the existing Coastal Inundation Flood Demonstration Project (CIFDP), a joint undertaking of the Joint Commission for Ocean Meteorology and the WMO Commission of Hydrology. At the same time, APFM is also involved in a European Council funded research project titled “Preparing for Extreme And Rare events in 3oastal regions” (PEARL), as part of a Consortium led by UNESCO-IHE and involving various Universities.

1.4.3 Transboundary Flood Management

In the context of integrated river basin management in transboundary basins, the transboundary approach of flood management aims at harmonizing activities in river basins in order to balance both risks and benefits from flooding in the basin. Cooperation with UNECE and Zoï Environment Network has been established in this regard. The selection of areas of implementation is still under discussion.

1.4.4 Reducing the Vulnerability to Flash Floods

This pilot project, implemented in seven countries in Central and Eastern Europe, focused on impacts of and responses to various flood events with a focus on flash floods. During a first phase, twelve events from the seven participating countries were studied and compiled in a summary report. During the second phase, the gaps identified in the earlier phase were addressed, increasing community resilience to cope with the effects of flash floods, with special regard to various aspects of the flash floods including early warning systems and their effectiveness.

1.4.5 Development of National Flood Management Strategies

National Strategies on Flood Management were developed with an integrated approach in support to the Governments of Kenya, Zambia, Thailand and Lao PDR.

2. Integrated Drought Management Programme (IDMP)

General:

2.1 The WMO/GWP Integrated Drought Management Programme supports stakeholders at all levels by providing policy and management guidance and by sharing scientific information, knowledge and best practices for Integrated Drought Management.

While the spatial scope is global, the results are be policy relevant and tailored to specific regional and national needs and requirements. The overarching approach proposed for the Programme centers around four key principles:

1) To shift the focus from reactive (crisis management) to proactive measures through drought mitigation, vulnerability reduction and preparedness;

2) To integrate the vertical planning and decision making processes at regional, national and community levels into a multi-stakeholder approach including key sectors, especially agriculture and energy;

3) To promote the evolution of the drought knowledge base and to establish a mechanism for sharing knowledge and providing services to stakeholders across sectors at all levels;

4) To build capacity of various stakeholders at different levels.

The Programme contributes to drought-related efforts of existing organizations and agencies with regard to:

- Better scientific understanding and inputs for drought management;
- Drought risk assessment, monitoring, prediction and early warning;
- Policy and planning for drought preparedness and mitigation across sectors; and
- Drought risk reduction and response.

More information available at: www.droughtmanagement.info

2.2 Specific activities:

Guidelines

WMO/GWP Integrated Drought Management Programme (IDMP) (2014) ***National Drought Management Policy Guidelines – A Template for Action*** **(D.A. Wilhite).** Tools and Guidelines Series 1. WMO, Geneva, Switzerland and GWP, Stockholm, Sweden.
The National Drought Management Policy Guidelines provide a template for action that countries can use in the development of a national drought management policy and drought preparedness/mitigation plans. The process is structured in 10 steps that can be adapted by countries to reflect their institutional, infrastructure, legal, socio-economic and environmental context.

The approach has influenced the development of drought policies in Brazil, Mexico, Morocco and the USA, of which case studies are included in the guidelines. The guidelines will be continuously updated based on the experiences gained in the guidelines' application. The guidelines respond to a need for action oriented drought policies, which Governments articulated at the High-Level Meeting on National Drought Policies.
Guidelines available at: http://www.droughtmanagement.info/guidelines/

2.3 Regional Programmes:

2.3.1 IDMP Central and Eastern Europe, based at GWP offices for Central and Eastern Europe, is providing practical advice on how droughts can be managed with the goal increase capacity and ability of countries in Central and Eastern Europe for adaptation to climate variability and change by enhancing resilience to drought. Outputs that are coming forward range from • Guidelines for the preparation of drought management plans within river basin management plans according to European Union Water Framework Directive • National consultation dialogues to discuss preparation of drought management plans • Compendium of good practices • Drought information exchange platform • Demonstration projects testing innovative solutions for better resilience to drought • Capacity building trainings and workshops on national and regional levels

More information available at: http://www.droughtmanagement.info/idmp-activities/idmp_cee/

2.3.2 Preparations are ongoing for **two regional IDMPs. One in the Horn of Africa and one in West Africa**, each based in the regional offices of GWP in Uganda (GWP Eastern Africa) and Burkina Faso (GWP West Africa). Both programmes are aiming to close the gap and provide an impetus to existing drought management initiatives in these regions. The WMO Regional Climate Centres and the GWP Country Water Partnerships will play a crucial role to bring the key actors not only from the water and climate communities but also from the agriculture and energy community together.

The **IDMP Horn of Africa** focuses on Eritrea, Ethiopia, Kenya, Sudan and Uganda. Djibouti, Somalia and South Sudan will be considered as for some components of the program.

More information available at: http://www.droughtmanagement.info/idmp-activities/idmp_hoa/

2.3.3 IDMP West Africa will focus its work firstly in targeted localities in West Africa, the countries are currently being identified and then share lessons learned with other neighbouring countries through the Country Water Partnerships and the Regional Climate Centre and other interested stakeholders.

More information available at: http://www.droughtmanagement.info/idmp-activities/idmp_waf/

2.3.4 In **South Asia** the IDMP is collaborating with IWMI and GWP South Asia in developing a **South Asian Drought Monitoring System (SA DMS)**, to monitor drought in Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka.

More information available at: http://www.droughtmanagement.info/idmp-activities/south_asia/

3. CLIMATE AND HEALTH

Global Framework for Climate Services (GFCS) Adaptation Programme in Africa- Overview for Health Partners

3.1 Background

The impacts of climate change are now being observed on all world continents. Africa remains the most vulnerable and faces increasing challenges to improve food security, nutrition and health, provide adequate water, and protect populations from extreme weather events, due to the shocks and pressures climate change is placing on their sustainable socio–economic growth. African nations must act quickly to understand and manage the risks of climate change and appropriately adapt. Unfortunately, currently, an estimated 70 nations worldwide have inadequate or no climate services1 to provide the basic and essential information for these efforts, and thus these nations remain ill equipped to tackle the impacts of climate variability and change.

The Global Framework for Climate Services (GFCS) was launched in 2012 as a global partnership of climate service producers (i.e. National Meteorological Agencies) and users of climate information and services (i.e. priority sectors of Agriculture, Water, Health, and Disaster Sectors) to work together to improve the quality, quantity, and use of climate and weather services worldwide. This new programme serves to mobilize partners to implement the framework for climate services at national level in order to improve cooperation, capacity, and use of accessible and accurate climate services that can inform climate adaptation.

3.2 Programme Goal

The ultimate goal of the programme is to increase the resilience of people most vulnerable to the impacts of weather and climate-related events through the development, implementation and evaluation of a multi-sectoral Climate Services programme. The programme will help build integrated frameworks for climate services at the national level and focus on supporting the existing needs of the food security, health, and disaster risk reduction to make better decisions for climate risk management and climate adaptation.

3.3 Programme and Partners

This project is governed by a grant agreement signed between World Meteorological Organization and the Norwegian Ministry of Foreign Affairs for a multi-agency Global Framework for Climate Services Adaptation three–year (2014 – 2016), with a total budget of USD 10 million. The focus countries for this programme are Tanzania and Malawi**;** the programme will also have a component in food security and nutrition in Ethiopia. The Recipient Agency will hold responsibility to carry out all the logistics for the implementation of financed and agreed activities.

The programme uses a partnership approach, involving seven international agencies and research institutes:

- World Meteorological Organization (WMO)
- World Health Organization (WHO)

- World Food Programme (WFP)
- International Federation of Red Cross and Red Crescent Societies (IFRC) including Norwegian Red Cross and Red Cross/Red Crescent Climate Centre
- CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)
- Centre for International Climate and Environmental Research – Oslo (CICERO) and the Chr. Michelsen Institute (CMI)

This is the first collaboration between the above agencies on delivering climate services. WMO serve as the lead for the partnership and leads the coordination with local partners: Tanzania Meteorological Agency (TMA) and the Ministry of Climate Change and Meteorological Services in Malawi.

3.4 The Health Problem

This project addresses a two-fold public health problem. First, climate change has real impacts on health priorities in Africa, such as vector and water borne disease, malnutrition, and disaster related threats. The health sector recognizes there is a distinct need to begin to adapt. Some steps have been taken by Ministries of Health to formulate action plans, such as the Libreville Process for Health and Environment, and Framework for Public Health Adaptation to Climate Change in the Africa Region (AFR/RC61/10). However, secondly, for health policy makers to be able to integrate climate change into health policy, and for health managers and technical professionals to manage climate risks and adapt to climate change, specific capacity and information about the climate and how it affects health at different timescales is needed. Unfortunately, in many highly vulnerable countries such as Tanzania and Malawi, this information is either not available, not being used, or the capacity and necessary cooperation to use available tools is lacking. This presents a barrier to effective climate risk management and climate adaptation.

3.5 Project Organization

A global project steering committee representing international partner organizations, serves to coordinate across agencies and provide technical support to the local implementing agencies. On the climate service provider-side, WMO will strengthen the capacity of the National Meteorological Authorities to provide climate information and services. On the user-side, sectoral partners (i.e. WHO, WFP, CCAFS and IFRC), will work with their respective sectoral authorities to build capacity to mainstream the use of these services into sectoral planning and programming. Research partners (CICERO, CMI) will be working with local researchers, to capture lessons for future programming. For the Health Sector, this project will be implemented by the Ministries of Health of Malawi and the Republic of Tanzania, in partnership with WHO and other national health sector actors.

3.6 Health Project Overview

Over 3 years, this project will explore how health actors in Malawi and Tanzania can better use climate information to inform health planning, research, and public health responses to climate-related health risks, such as cholera, malaria, malnutrition, and disasters.

Health Project activities fall in 7 categories, and take place at both the national and sub-national level.

- Mainstreaming Climate Change into Health Policy
- Inter-sectoral coordination mechanisms for climate information
- Vulnerability and Adaptation Assessment
- Capacity Building

- Developing and pilot testing 2 different climate services for health at the local level
- Awareness raising and risk communication
- Operational Research on health sector needs for climate services

3.7 Desired Outcomes in Malawi and Tanzania:

- **Health policy-makers and professionals become aware** of climate risks to risks as well as the existing policies, tools, resources, and solutions to better manage these risks
- The **Ministry of Health** take ownership to address climate change, and strengthen the continued partnership with National Met Services and other sectors to support these efforts.
- **Health priorities become integrated within UNFCCC National Adaptation Plans (NAPs) and a priority area in the Nairobi Work Programme (NWP)**, in order to improve climate change adaptation.
- **Capacity of health professionals** to identify needs, communicate health risks, and use tailored climate products and services to support health adaptation is increased.
- **Health risks sensitive to climate change are assessed and prioritized,** along with existing capacity to use climate information for risk management.
- **Quality climate products become available and adopted** as public health tools that improve *health research, monitoring and epidemiological surveillance, early warning and preparedness, and health system strengthening,* strengthening core elements of health risk management and adaptation.

3.8 WMO and WHO Joint Office for Climate and Health- A Success Story

The World Health Organization and the World Meteorological Organization have joined forces to tackle the increasing risks to human health posed by weather and climate hazards such as extreme temperatures, floods, droughts and tropical cyclones.

A new WHO/WMO Climate and Health office has been established under the auspices of the Global Framework for Climate Services (GFCS) to promote the coordinated development and use of climate services to improve public health. It will increase awareness, build capacity, and connect meteorological services with experts in the health sector in an active partnership for climate adaptation and risk management.

There have been great strides in both climate and health science in recent years. By working together, WMO and WHO can maximize the benefits of these advances for the greatest possible number of people. Climate change is leading to an increase in extreme events such as heat-waves and heavy rains which have a major impact on human health.

The move comes in response to increasing demand from the health community for improved access to climate and weather products like regional climate predictions, hazard warnings and seasonal outlooks needed to understand and manage health risks related to weather and climate and to cope with a shifting burden of disease due to climate change. The office will ensure that there is in-house health expertise at WMO and a focal point for liaison with WHO and other health partners.

Millions of people each year are affected by extreme weather events such as heat and cold waves, tropical cyclones, floods, and droughts. These events also damage or destroy health facilities and water and sanitation infrastructure, and result in unnecessary deaths and illness. Yet the most significant impacts often occur indirectly and more slowly, such as under-nutrition resulting from crop failure, respiratory diseases from poor air quality, and water-borne and vector-borne diseases. Climate-informed preparedness and prevention can greatly reduce these health risks.

3.9 Climate-smart health systems

Climate-smart health systems and services not only save lives but help increase the efficient use of limited resources by identifying and targeting vulnerable populations. For example, sand and dust forecasts are being used in the Sahel to target meningitis vaccination drives in the areas at highest risk. Seasonal climate outlooks can be effectively used in malaria control campaigns.

However, a longstanding challenge for the health community has been the ability to access, understand and apply available climate information. Likewise, climate services community often does not fully appreciate public health concerns and needs. In the past there was little dialogue between the two sectors. The new climate and health office is an important step to help bridge this gap. Stronger collaboration at the global and local levels is essential if relevant, reliable and user-friendly climate information is to effectively strengthen disease surveillance and improve preparedness for health emergencies and outbreaks of climate-related diseases such as cholera or dengue fever.

The WMO/WHO Joint Office will help to achieve the goals of the Global Framework for Climate services, an ambitious international initiative which seeks to improve and expand climate and weather services such as seasonal forecasts and drought monitors, and support their uptake by key sectors such as *health, food security, water and disaster risk reduction*.

3.10 Global Framework for Climate Services (GFCS)

The joint office will provide support in four main areas. Firstly, it will ensure that the potential contribution of meteorological services is reflected in international health policy fora, such as the World Health Assembly, and forthcoming WHO conference on health and climate in August 2014. It will also propose a strategic roadmap for WMO and the meteorological community to better support the health sector to access and use climate information and services.

Secondly, the Office will provide coordination, resource mobilization, and technical support to demonstration projects and research, beginning with the new Climate Services Adaptation Programmes in Malawi and the United Republic of Tanzania. This initiative will support collaboration between health partners and the national meteorological departments, to make better use of weather information and seasonal forecasts to enhance risk assessment and preparedness for diseases such as malaria, diarrhea and under-nutrition.

Thirdly, the joint office will strengthen coordination and collaborative initiatives between WHO and WMO, and with the wider community of practice for climate service action for health.

Fourthly, the office will provide communications and capacity development by developing awareness raising and technical guidance materials, building on the successful cooperation between WHO and WMO in the publication of *The Atlas of Health and Climate* in 2012, and forthcoming guidance on developing heat-health early warning systems.