

ASSOCIATED PROGRAMME ON FLOOD MANAGEMENT

DRAFT ANNUAL REPORT (2023-2024)

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Geneva, Switzerland



WORLD METEOROLOGICAL ORGANIZATION

The World Meteorological Organization (WMO) is a specialized agency of the United Nations. It coordinates the activities of the meteorological and hydrological services of 193 countries and territories and is the UN authoritative voice on weather, climate, and water.



ASSOCIATED PROGRAMME ON FLOOD MANAGEMENT

The Associated Programme on Flood Management (APFM) is a joint initiative of the World Meteorological Organization (WMO) and the Global Water Partnership (GWP). Since 2001 it has promoted the concept of Integrated Flood Management (IFM) as an approach to flood management.



GLOBAL WATER PARTNERSHIP

The Global Water Partnership (GWP) is an international network whose vision is for a water-secure world. The GWP's mission is to advance governance and management of water resources for sustainable and equitable development. Created in 1996 the GWP network is open to all organizations that recognize the principles of integrated water resources management endorsed by the network.

This Annual Report documents the activities undertaken by the APFM Technical Support Unit during the reporting period 01st August 2023 to 31st August 2024. It summarizes the key activities and achievements, and initiatives undertaken by the APFM programme in improving global flood management.

Brief Overview

During the reporting period, the Associated Programme on Flood Management (APFM) has continued to advocate and apply the concept of Integrated Flood Management (IFM) at local, national, and regional levels developing tailored, effective and sustainable solutions for socio-economic and environmental benefits to various stakeholders. The IFM Helpdesk has been operated by the APFM Technical Support Unit (TSU) and was instrumental in providing support to the WMO Member countries (National Meteorological and Hydrological Services (NMHSs)), other government agencies, international organizations, academia, NGOs, and private entities, etc. strengthening their flood management approaches, in general integrated water resources management mainly through capacity development, guidance tools, and implementation of pilot projects. The APFM TSU continued to support various activities of the WMO projects such as Volta Flood and Drought Management (VFDM), Water at the Heart of Climate Action (WHCA), different CREWS projects such as Caribbean, Djibouti, Cambodia, Central Asia and USAID funded EWS-F and Flash Flood Guidance System (FFGS).

The APFM along with the expertise of 30 plus Support Base Partners (SBPs) is continuously supporting the UN Early Warning for All initiative (EW4All) (initiated in 2022 whose objective is to ensure that everyone on this planet by an early warning system within next five years). Flood (and drought) disasters have been growing and there are various requests received from the WMO Member countries to provide support in strengthening their capacities and capabilities to monitor, forecast, and provide impact-based warning services. The APFM has been identifying funding opportunities through bi-lateral discussions with various donors or financial institutions to support core activities of the APFM as well as implement concrete flood management projects under the overall umbrella of the UN EW4All. Some examples of this include discussions with the Ministry of Environment, the Republic of South Korea, Austrian Development Aid (ADA), and the Trafigura Foundation to support core APFM activities and flood management related projects. The discussion for funding is still on-going with Ministry of Environment (MoE), the Republic of South Korea and Austrian Development Aid (ADA), with the support of WMO and GWP Resources Mobilization offices. APFM TSU continues to explore opportunities with other donors or financial institutions and in the meantime, the co-sponsoring institutions WMO and GWP continue to support the operation of the APFM.

The APFM programme has been presented during various Global events such as Stockholm World Water Week 2023, Water Forum held in Bali, UN Conference of Parties etc. to various participants attending from governmental agencies, international organizations, academia etc. The objective being to create awareness about the APFM HelpDesk, tools and policy documents, project activities which a country or organizations can benefit from as well as identify funding opportunity for implementing projects. The APFM IFM HelpDesk (which received 60 requests in the reporting period) have been used by flood managers, practitioners, and researchers requesting guidance on existing

IFM tools and policy documents, assistance for capacity development workshops and pilot projects. The WMO SC-HYD and GWP continued the efforts (especially in mapping the existing tools, organizations and expertise etc.) to expand the scope of the IFM and IDM HelpDesks to cover or inform IWRM related topics. The Water Youth Network (WYN) with their volunteers continued to provide support on communicating APFM through social media and engagement of youths through the youth led flood and drought EWS competition.

APFM institutional development

During the reporting period, the World Meteorological Organization has appointed Ko Barrett as Deputy Secretary-General and Thomas Asare as Assistant Secretary-General, cementing a new Executive Management team under the leadership of Secretary-General Prof. Celeste Saulo. The new WMO Executive Management will be responsible for implementing WMO's top priorities. These include the strengthening of Early Warning Services to protect everyone on Earth from hazardous weather, water and climate related events, supporting climate adaptation, as well as the envisaged development of a new Global Greenhouse Gas Watch to inform climate change mitigation. In order to achieve this, there is an important need to strengthen hydro-meteo observations and data exchange which underpin reliable and accessible weather and water monitoring and forecasts for early warning services.

SERCOM-3 and SC-HYD progress on different milestones

The third session of the Commission for Weather, Climate, Hydrological, Marine and Related Environmental Services and Applications (SERCOM-3). (including the Gender Conference) was held at Bali, Indonesia from 4 to 9 March 2024, in a hybrid format, with representatives from more than 80 SERCOM Member countries, international organizations participated. The overall scope of SERCOM-3 was to bring together technical experts from all around the world and to facilitate their collaboration in developing standards for methods, procedures, techniques and practices, and to ensure that their recommendations are provided to the WMO Congress and Executive Council. The Gender Conference, held on 7 March 2024, aimed to share knowledge and facilitate exchanges on promoting Gender Equality and Women's Empowerment and Leadership through the Early Warnings for All initiative. During the SERCOM-3, the Chair of SC-HYD and WMO Secretariat presented the 36 Milestones (Different milestones are available under the Annex to Decision 7 (SERCOM-3) which were defined and agreed during the face to face meeting of SC-HYD in Rome, Italy during November 2023) related to hydrology and water resources management (one of them is to provide technical scientific advisory support to both APFM and IDMP programme and other one is on the expansion of the IFM and IDM HelpDesk to inform and cover IWRM related topics). The SERCOM requested Standing Committee on Hydrological Services (SC-HYD) in consultation with the Hydrological Coordination Panel (HCP), relative subsidiary bodies in SERCOM, INFCOM, Research Board

(RB), Capacity Development Panel (CDP) and RAs, as well as with the Global Water Partnership (GWP), the United Nations Economic Commission for Europe (UNECE) Water Convention, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and other potential partners to synergize efforts to continue the development of the milestones as well as collecting, organizing and displaying the contributions of SERCOM Members (requested to provide volunteers technical experts to be part of SC-HYD or in the working group) to these milestones and report on advancements at SERCOM-4.

Update on progress related to EW4All initiative

The World Meteorological Organization (WMO) continued with the implementation of the Early Warnings for All (EW4All) initiative, which aims to ensure that everyone on Earth is protected by early warning systems by 2027. This initiative, launched by the UN Secretary-General in 2022, has become the WMO's top priority, reflecting the urgent need to protect vulnerable populations from increasing weather and water-related disasters due to climate change. EW4All has been extended from the priority 30 countries to other countries where different projects linked to the EWS are being developed or implemented by different Pillar lead organization or agencies. Recent updates highlight that the WMO is heavily involved in implementing this initiative across various regions. For instance, in Asia and the Pacific, efforts include the development of national roadmaps and regional strategies (National Roadmap Development for many countries such as Ethiopia, Lao, Cambodia, Nepal etc. and regional level action plan or strategy– eg Multi-hazard Early Warning for All Action Plan for Africa (2023-2027)) to integrate multi-hazard early warning systems. This includes significant training and capacity-building activities aimed at empowering national and local governments and organizations to better anticipate and respond to disasters. Similarly, in Asia, Africa, Pacific and the Caribbean regions, focused efforts are being made to close observation gaps in early warning system coverage, particularly in areas that lack access to essential weather information, which is been supported by the Systematic Observation Financing Facility (SOFF) initiative, a UN Multi donor Trust Fund. A core aspect of the WMO's work is its leadership in the technical implementation of end-to-end early warning systems, which includes advancing global observation networks, especially in developing countries where coverage is currently inadequate, technical support in modelling and forecasting and availability and delivery of the early warning services. The WMO also emphasizes a multi-hazard approach, recognizing the interconnected nature of various risks like floods and drought. Overall, the WMO's commitment to EW4All is evident in its strategic focus and the broad collaboration with other UN and international partners, such as the UN Office for Disaster Risk Reduction, International Telecommunication Union (ITU) and the International Federation of Red Cross and Red Crescent Societies. These efforts are critical as they not only aim to save lives but also reduce economic losses associated with weather and water-related disasters. A Roadmap for WMO contribution implementation of the EW4All has been approved by WMO Executive Council in June 2024 through Resolution 1 (EC-78). APFM and

IDMP appear among those activities related to the implementation of EW4All. The roadmap constitutes a “living document” and will be periodical reviewed and updated by the WMO Technical Coordination Committee.

WMO projects (highlighted below under section support to WMO projects) funded by the the CREWS initiative, Adaptation Fund, Ministry of Foreign Affairs of Sweden, Danish contributions, and the Kingdom of the Netherlands etc., are part of a broader effort by the WMO to close gaps in early warning coverage, especially in regions that are most at risk from climate-related disasters.

GWP- new leadership and new strategy from 2025

Mr Alan Atkinson took the role of GWP Executive Secretary starting his tenure from 1 February 2024 onwards after the conclusion of Mr. Per Bertilsson's tenure as the Interim Executive Secretary. Before this appointment, Alan was Assistant Director-General at Sida and brings significant experience from his leadership roles in the development sector. He officially assumed his new position on 1 February 2024. The APFM extends its gratitude to Per Bertilsson for his leadership during the transition period. Under the leadership of Mr Atkinson, GWP is developing a new strategy from 2025 to support the countries and organization in strengthening their capabilities on Integrated Water Resources Management (IWRM).

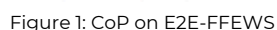
New MoU between WMO and GWP

On World Water Day, GWP's Executive Secretary Alan AtKisson and WMO's Secretary-General Celeste Saulo signed a new Memorandum of Understanding (MoU) at WMO Headquarters in Geneva, Switzerland. This agreement aims to strengthen collaboration between the Global Water Partnership (GWP) and the World Meteorological Organization (WMO) towards achieving a world where people are no longer threatened by droughts or floods. The MoU outlines several key priorities:

- Scaling up and accelerating the implementation of integrated flood and drought management globally through the joint programmes APFM and IDMP.
- Providing access to knowledge and support for stakeholders on integrated flood, drought, and water resources management through the joint 'HelpDesk'.
- Enhancing knowledge management, capacity building, South-South learning, and scaling up outreach efforts through Communities of Practice.
- Enabling countries, WMO Members, and partners to access climate finance for high-impact water and climate projects through capacity building.
- Strengthening multi-stakeholder engagement with a focus on the most vulnerable, enhancing hydrological monitoring systems, and establishing Early Warning Systems.
- Raising awareness for prioritizing climate and water resilience at all policy levels, including international conventions and platforms.
- Developing joint programmes, projects, service delivery, and resource mobilization.
- This MoU marks a significant step in enhancing and further operationalizing the

Community of Practice (CoP) on E2E-EWS for Floods Forecasting and IWRM

SC-HYD is working with GWP, under its Milestone 9, to explore the existing tools and link the activities of CoP.



APFM implementation plan for the next 3 years

The APFM implementation plan was discussed with the SBPs during the previous APFM SBPs forums of 2022, 2023 and 2024. Based on several discussions and suggestions, the APFM TSU has made progress in drafting the initial implementation plan with priority focus areas or themes. The three-year APFM implementation plan is to support Member countries establishing and strengthening Integrated Flood Management with a focus on flood early warning systems including capacity development for warning services and early action at local, national and regional levels. The APFM implementation plan will be aligned and linked to the overall WMO Strategic objectives (including the EW4All initiative), WMO Vision and Strategy for Hydrology and its related Plan of Action (HPoA) as well as the GWP’s 2025 Strategy and the 2023-2025 Work Programme and the strategy for 2026-2032, for which the planning has started. The key focus or thematic areas of the APFM implementation plan are shared below in the table. The APFM Implementation plan (presented in a draft form) will therefore be further discussed during the APFM Annual SBPs forum and agreed upon for implementation in the next three years with active involvement of WMO SC-HYD experts, GWP and their country partnership and APFM SBPs.



Figure 3: Suggestions provided by the APFM SBPs forum during one of the APFM SBPs forum

Activities	Linked to HPoA/GWP's workplan	Deliverable and Timeline
Explore opportunity for funding to support core activities of the APFM programme	<ul style="list-style-type: none"> GWP Workplan: Work Package 6: Water security and climate resilience investments catalysed; finance mobilised and leveraged – linked to regional and national processes Work Package 3: NDC, NAP, drought and flood planning implementation accelerated Enhance cooperation across sectors, raise profile of water in NDC implementation in collaboration with the N HPoA: Activity B.6.1 Development support of project proposals 	<ul style="list-style-type: none"> Mapping of potential donors or financial institutions to support the core activities. Develop a concrete concept note with the activities that will be supported by the APFM, potential regions to be targeted, institutional arrangements etc.
Proactively engaging and supporting countries through the UN Early Warnings for All (EW4ALL) initiative.	<ul style="list-style-type: none"> GWP Workplan: Work Package WP 7: Water security & climate resilience integrated in high-level UNFCCC global processes and frameworks, including in SDG implementation – linked to regional and national processes HPoA: Activity A.7.1 - Utilize the framework mechanism to sponsor development initiatives through Project Proposal development and provision of Reimbursable Advisory Services through e.g. the IFM Helpdesk, IDM, and IWRM 	Develop new projects or provide support to on-going projects in the targeted countries or regions mainly using the existing tools and platform and expertise of the SBPs 2024-2027
Continue to provide assistance on flood management related topics mainly rapid guidance on IFM, capacity development workshops and pilot projects through IFM-IDM Helpdesk.	<ul style="list-style-type: none"> GWP Workplan: Work Package 1: Global and regional partnerships mobilised for project preparation for water security and inclusive, climate resilient development HPoA Activity B.9.1 – APFM Capacity Building - Capacity Building activities in flood forecasting and integrated flood management 	<ul style="list-style-type: none"> Continue to monitor and provide assistance to the HelpDesk requests (atleast 50 per year) received. Expansion of the HelpDesks to cover or inform IWRM related topics 2024-2027
Ensure a Community of Practice is established with specific guidance tools and discussion forums on topics related to Integrated flood management.	<ul style="list-style-type: none"> GWP Workplan: Work Package 4: Climate resilience knowledge, analytical tools developed and share HPoA B.3.1: Community of Practice on End-to-End Early Warning Systems for Flood Forecasting, including guidance on emerging technologies and services for data acquisition and analysis Developing mechanisms on implementing recommended practices via a team of experts to support knowledge exchange. This will be complemented by a repository of capacity building materials (guidance, e-learning), including those relating to the role of the new technologies intended to address geographical constraints or insufficient local resources. 	Community of Practice on Integrated Water Resources Management (IWRM) is operational and used by various experts 2024-2027
Strengthen community-based flood management and provide overall guidance on inclusive and people-centric flood management approaches	<ul style="list-style-type: none"> GWP Workplan: Work Package 5: Climate resilience programmes developed HPoA Activity B.8.4: Guidelines on enhanced communication between hydrological forecasters and users 	Ensure IFM projects have components on community based flood management ensuring last mile connectivity, people-centric EWS
Continue designing and tools or projects on Integrated approach to floods and drought management not in silos.	<ul style="list-style-type: none"> GWP Workplan: Work Package 4: Climate resilience knowledge, analytical tools developed and share HPoA Activity B.9.1 – APFM Capacity Building Capacity building activities in flood forecasting and integrated flood management 	Develop tools and guidelines on the integrated management of floods and drought and wherever possible have projects with water related hazards such as VFDM or Water @Heart projects

Letter of Engagement with the Support Base Partners





During the reporting period, some of the existing or new SBPs who have signed the new Letter of Engagement (LoE) or are presently under finalization are as below:

Name of the SBPs	Important areas of cooperation
Regional Centre of Urban Water Management (RCUWM) and Iran Water Resources Management Company (IWRMC)	<ul style="list-style-type: none"> Cooperation to implement Integrated Flood and drought early warning system at regional level Capacity development on flood and drought EWS Data and information exchanges and sharing of best practices on data quality control and dissemination
Swedish Meteorological and Hydrological Institute (SMHI)	<ul style="list-style-type: none"> Design, development, and operation of flood monitoring and prediction system including impact-based forecasts Capacity development and training on IFM strategies especially flood forecasting and early warning
Antea Group Belgium	<ul style="list-style-type: none"> Development of multi-hazards, vulnerability, and risk assessment tools and approaches People centre flood early warning system Capacity development on integrated flood management

Technical Assistance through IFM HelpDesk



The IFM Helpdesk continues to receive requests for assistance from users working on topics related to flood management and in general IWRM. In the reporting period, 58 number of requests were received from various users of IFM HelpDesk. Details about the HelpDesk requests are presented in the below table (check Annex 1 for details on the requests received in the reporting period and refer to previous annual reports for earlier requests).

 668 since inception Average: 44 per year		Type of requests in 2023 - 2024			
+33% compared to the average		3  Assistance for the strategy	17  Capacity Development	38  Rapid guidance	Type of requesting institution
58 requests received during the reporting period (August 2023 - August 2024)		11 Private companies/ NGO's	20 International Organizations	19 Governmental Agencies	
				8 Universities & Academia	

Expansion of IFM and Integrated Drought Management(IDMP) Helpdesks to cover or inform water resources management and related topics is on-going activities following the endorsement of resolution 19 during Cg-19. During the reporting period, the APFM and IDMP TSU supported the WMO SC-HYD experts in mapping on the existing resources such as tools, projects, organization with experts in the IWRM related topics etc.

Following the mapping exercises of the existing resources (ending by end of October 2024), an implementation plan will be developed and shared with the SERCOM Management team for presenting the progress and next steps.

Volta Flood and Drought Management (VFDM) Project (September 2023-July 2024) and the closing of the project

The Volta Flood and Drought Management (VFDM) project has successfully completed its five years of implementation at the end of June 2024. During the closing workshop, the final project technical advisory committee meeting was also held in Accra, Ghana on 21 June 2024.

During the reporting period, the below table presents the list of Volta Basin Flood and Drought Management (VFDM) project activities that were carried out and associated outputs delivered jointly with the APFM Support Base Partners namely CIMA Research Foundation, IUCN, Knowledge and Innovation (K&I).

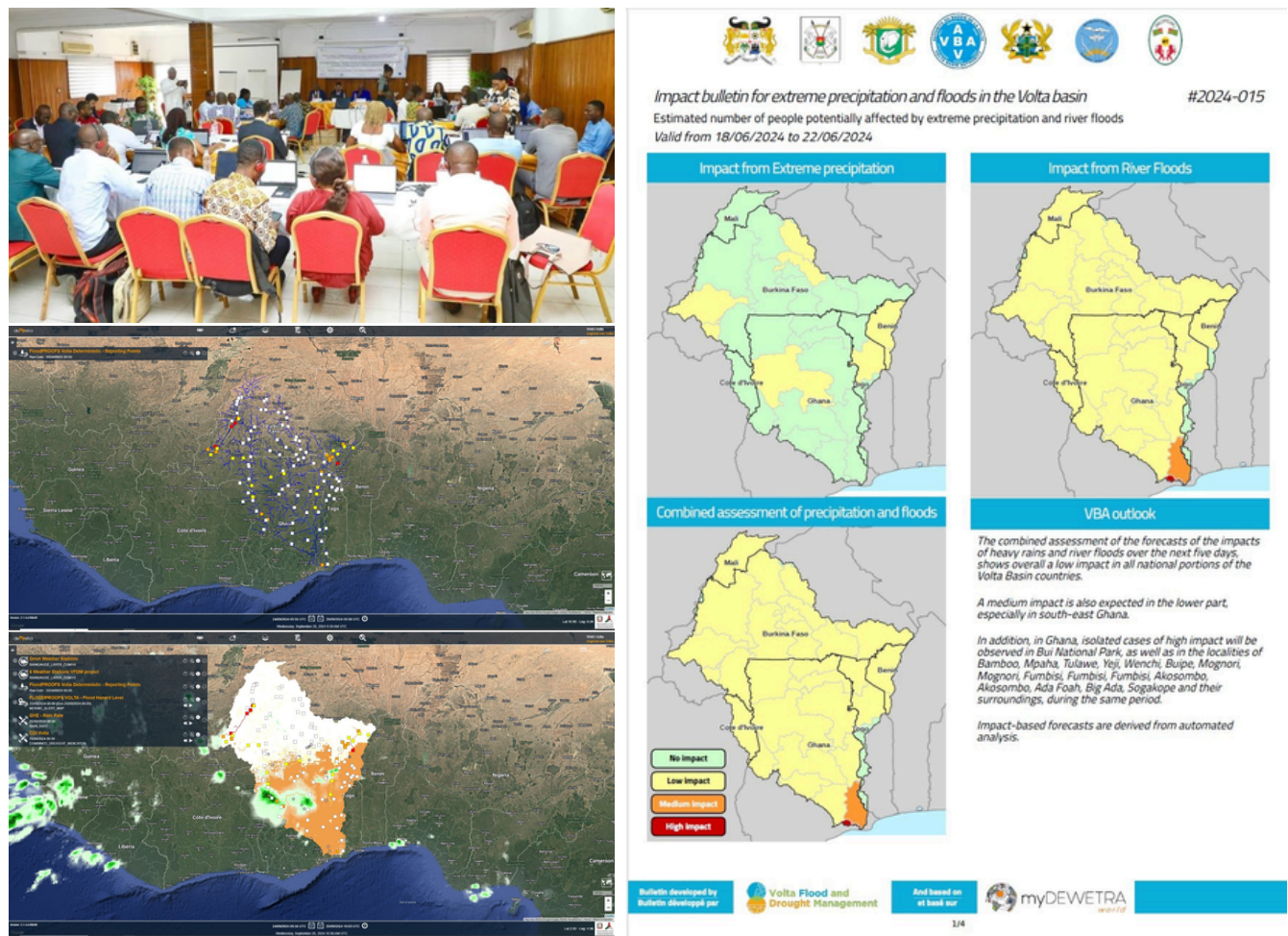


Figure 4: VOLTALARM EWS developed under the VFDM project, training on impact-based flood and drought forecasting and dissemination of the regional bulletins to various stakeholders

Major activities completed and outputs delivered until June 2024

National consultation reports for the Six countries and Volta Basin Authority to identify capacities, gaps, and needs for developing EWS on floods and drought.

Feasibility study on the application of the IUCN Red List of Ecosystems and guidance documents to promote ecosystem services through Nature-based solutions in the Volta Basin are completed.

The design and development of the VOLTALARM impact-based floods and drought early warning system for stakeholders in the Basin, namely the National Meteorological and Hydrological Services, and disaster management authorities. Link to the VOLTALARM EWS <https://myDewetra.volta.world>.

The VOLTALARM EWS was pilot-tested in 10 prone areas of the Volta Basin during the monsoon and dry seasons to identify the applicability and effectiveness of the early warning-early action at the local levels.

The provision of training to over 200 participants from project countries through distance learning courses on Basic and Advanced Hydrology, Geospatial information, drought monitoring and early warning services and response in the Volta Basin region.

Activities planned from July 2024- December 2024

Continue the use and testing of the VOLTALARM EWS together with the national agencies and Volta Basin authority.

Close the agreement with various executing and technical partners of the VFDM project with the submission of the technical reports of the activities and financial expenditure statement.

Conduct the independent final financial audit and submit the financial evaluation report to the Adaptation Fund.

Continue building synergies and complementarities with the existing projects or initiatives such as UNEP-DHI funded REWARD regional project, World Bank supported Hydro-met project in Burkina Faso etc.

Discuss with the national agencies and regional entities for the development of the phase-2 of the VFDM project to expand the VOLTALARM EWS to cover the entire region of the six Volta Basin countries.

The provision of in-person training to some 200 regional, national and local stakeholders on gender mainstreaming and nature-based solutions for flood and drought management in the Basin.

The implementation of community-based flood and drought management activities in the six communities of the Volta Basin.

Development of the 'voices from the field' booklet with success stories, challenges and long term sustainability strategies.

Review of the existing policies, plans and guidelines on flood and drought management at the regional, national and local levels of the Volta Basin countries and provide recommendations for improvements.

Installation the National Centralized Database (WMO Meteorological, Climatological and Hydrological (MCH) database) and integrate the existing hydrological and meteorological observation data which is been visualized under the VOLTALARM EWS.

The fourth-year project progress report (PPR-III) was requested to be submitted to the Adaptation Fund in August 2024, and the submission of the final project completion report, is planned for December 2024.

The APFM TSU will continuously work with the SBPs to continue supporting remotely to ensure that the project outputs are operational and sustained by the countries and regional authority (Volta Basin Authority) even after the completion of the project.

Provision of Technical Expert Service to WMO/GWP on-going projects and initiatives

CREWS Cambodia and Lao PDR

Continuing the previous year's activities, WMO is leading the implementation of impact based flood early warning system in Cambodia and Lao PDR, enhancing the capacities of the national and regional stakeholders/institutions to provide hydro-met hazards monitoring and delivery warning services for early action and response measures to various agencies and international organizations. The APFM TSU with the SBPs (Asian Disaster Preparedness centre and CIMA Research Foundation) supported the project mainly to the NMHSs and disaster management agencies with the development of national flood and drought risk maps, hydrological modeling and impact-based flood forecasting in the three pilot basins of Cambodia and Lao PDR and community-based flood management (supporting directly around 10,000 individuals) in Cambodia. The project will officially complete its implementation by July 2025 and the phase 2 of the project has been approved by the CREWS steering committee and will begin implementation from August 2025. The work plan for the phase 2 of the project will be discussed in the next project steering planned in November 2023.

Water at the heart of Climate Action (WHCA)

Under the framework of the UN Early Warning for All Initiative, the project WHCA (funded by the Ministry of Foreign Affairs (MoFA) Netherlands) has completed the Inception phase of the project which was mainly to carry out consultations with the national and local agencies of the five targeted countries of the Nile Basin (Ethiopia, Rwanda, South Sudan, Sudan and Uganda) to identify gaps and needs in the all the four Pillars of the EWS.

The Four international partners (WMO, International Federation of the Red Cross and Red Crescent Societies (IFRC), UNDRR, and Systematic Observations Financing Facility (SOFF) collaborated with the national and regional entities to discuss the existing capacities, gaps and needs and the ways to develop synergies and complementarities with other on-going initiatives and projects in the countries.

WMO is leading the Pillar 2 (observation, monitoring, forecasting for the water related hazards) of the EWS worked with the APFM SBP partner CIMA Research Foundation who lead the consultation with the national meteorological and hydrological services to check with the availability of hydro-meteorological data, models and capacities for the strengthening or establishment of flood and drought early warning system. The national assessment/ consultation reports are available here and were used for developing the overall Inception report of the project which was submitted to the donor at the end of August 2024 for review. Following the review and endorsement from the MoFA, the project implementation will start in the countries.

Gender mainstreaming training manual and capacity development workshops planned in Cambodia and Lao PDR, Nile Basin countries and the refined manual will be published for organizations or partners to apply the methodology in their country or region.

The APFM TSU is working with the SBP Knowledge&Innovation to finalize the training manual for mainstreaming gender into end-to-end flood forecasting and early warning system and integrated flood management. The training manual has been tested in various countries or regions such as Volta Basin, South Africa Development Cooperation (SADC), Caribbean, Costa Rica and lessons learnt, good practices have been incorporated in the refined training manual. Following the final two workshops planned in Nile Basin countries and Cambodia and Lao PDR, the refined training manual will be finalized and published for general use.

New Project development on activities related to Integrated Flood Management

- **Early warning system related activities in the Lake Chad, Central Asia and Pacific regions.**

The APFM TSU continued to support the design and development of various WMO pipeline projects which are focussed on early warning system for floods and drought. One of the advanced projects is the one of Lake Chad Basin for which the WMO division has submitted the final proposal to the Adaptation Fund for review and endorsement for implementation starting from May 2025. Similarly, other regional project pre-concept note in Central Asia and Pacific regions are developed with the technical support and contribution of the APFM TSU and will be submitted to the Adaptation Fund for funding in 2025. These projects will be instrumental in applying various APFM tools, products and use the expertise of the APFM SBPs in strengthening the capacities and capabilities of the local, national and regional agencies involved in flood management.

- **Hydrological Status and Outlook System in Bangladesh and Nepal (HydroSOS-BaNe)**

The APFM TSU together with the WMO HydroSOS team is leading the development of the HydroSOS-BaNe project in Bangladesh and Nepal (initially planned for the region of Ganga Brahmaputra and Meghna Basin).

The project concept note was approved by the Adaptation Fund during the 42nd Board meeting held in April 2024 and requested the implementing and executing partners to submit the full project proposal. Following the approval of the concept note, WMO drafted the project proposal, and a regional validation workshop was held at the end of June 2024. The executing partner of the project (national meteorological and hydrological services) supported in conducting the mandatory social and environmental impact study for the project. The final project proposal will be submitted in October 2024 and hopefully will be approved in the next Board meeting planned in March 2025.



Figure 5: regional workshop in Thailand to validate and finalize the project proposal for the HydroSOS BaNe project

Other new opportunities - contribution from the SBPs

The APFM TSU welcomes new project ideas or opportunities for collaboration to support with IFM-related activities development and implementation in line with the APFM Business model.

Horizon Europe - Call for proposal preparation by the APFM SBPs

Some of the APFM SBPs (including other interested partners from Europe) are collaborating to develop the project concept note to the call for proposal for Disaster-Resilient Society 2024 (HORIZON-CL3-2024-DRS-01) from the European Union (HORIZON-RIA HORIZON Research and Innovation Actions). The concept note is presently being developed targeting activities in some of the European countries and is expected to contribute to the following outcomes: More efficient interactions among the scientific community, research institutions and programs, first and second responders, city's risk managers of major crises, and citizens or local communities for enhanced coordination of the disaster risk management cycle and governance (including knowledge transfer and awareness of innovative solutions) from international to local levels, fostering a faster transfer of results from science into practice. The deadline to submit the project concept note is 24 November 2024. The role of the APFM is still under discussion mainly whether to participate as an associated partner (without financial access) or consortium partner to provide specific technical implementation support.

Resource Mobilization and Outreach

The APFM TSU constantly organizes or attends appropriate events and conferences where its available resources and expertise can be presented to a wider audience. The programme outreach will also help disseminate existing tools and expertise, identifying new avenues for partnerships especially attracting donors to fund the core activities or pilot projects. Some of the events actively organized or attended by the TSU are highlighted below:

Side-event during WMO SERCOM-3 WMO Flood Forecasting Initiative (FFI) for strengthening EW4All in the WMO Member countries

This side-event was organized by the APFM TSU on the evening before the discussion of Doc 5.6(1) on Hydrological Services and provided a good opportunity to remind SERCOM members about the APFM Integrated Flood Management (IFM) HelpDesk, present successful case studies contributing to EWS for floods by projects (VFDM, FFGS, W@HCA, CBFM etc.), and the technical support that WMO and its expert's groups can provide to countries in strengthening EWS for floods and flood management in general. The overall goal is to inform SERCOM Members how countries can engage and benefit from WMO-led initiatives or projects to improve services related to monitoring, forecasting or management of flood events.

Organization of the virtual exchange during World Environmental Day 2024

The APFM and IDMP programmes together with SBPs organized a virtual exchange on Community-based Flood and Drought Management - sharing of experience and learning for the future during World Environment Day 2024 celebrated on 5th June 2024. The overall objectives were to: 1) share experiences from APFM/IDMP partners on community-based drought and flood risk management approaches, 2) Reflect on the main challenges and opportunities encountered in community-based flood and drought risk management over the past decades and 3) Leverage APFM/IDMP experiences for future community-level flood and drought management projects.

Second call for proposal for youth-led flood and drought management projects

The APFM and IDMP TSU and Water Youth Network collaborated to organize the competition for the youth-led project ideas and select two winners for implementation of the concrete activities to support improved management of floods and drought in their country. Initially, more than 30 submissions of project

ideas were received and following the screen, the top 10 ideas were selected to develop the concept note including information on the involvement of stakeholders, budget plan, and sustainability etc. The ideas were then presented to the panelists from WMO, GWP, and WYN, and two winners were selected for the two projects below.

- Collaborative Mapping for Flooding Resilience - Project lead: Ms Yessica De Los Rios Olarte

The Collaborative Mapping for Flooding Resilience project is implemented by Youthmappers Chapters GeoLab and Sagma in Nueva Villa La Iguaña (Medellin, Colombia).

The project aims to enhance flood resilience by empowering the local communities through several activities, such as collaborative mapping, using open-source mapping tools to identify factors that affect flood vulnerability, and developing a community plan to increase flood resilience.

- Water from a Rock - Project lead: Martha Djan

The Water from a Rock project, implemented by Youthmappers, University of Pretoria (Pretoria, South Africa), aims at developing a real-time risk and preparedness platform to map disasters, identify high-risk areas, and prioritize efforts effectively.

The project engaged the youth with an interactive application to enhance preparedness and response to early warnings and alerts for extreme weather events based on geofencing, building resilience against floods.

Based on the implementation of activities, a video series presenting the activities and overall impacts for both projects has been prepared. The two introductory videos are available here:

- [Water from a Rock](#)
- [Collaborative Mapping for Flooding Resilience](#)

The two selected projects are expected to complete the final implementation by September 2024.

The way forward

For the next period, the APFM TSU will continue to work with WMO constituent bodies and IDMP TSU to progress on expanding the HelpDesk to cover or inform IWRM-related topics. This is important to ensure the users (government agencies, academia, international organizations and NGO's, etc.) are provided with necessary technical assistance to improve their overall water resources management including flood and drought risk management.

The APFM TSU will complete the pending activities to close the VFDM project and submit the closure report to the Adaptation Fund.

Also, the APFM and IDMP TSU will work with the countries to check for the development of the phase II of the VFDM project and submit it to the donor or financial institutions.

In parallel, the APFM TSU will continue to develop or implement new projects focussing on E2E-EWS-FF (Integrated Flood and Drought management in general) in various regions (national, transboundary) mainly supporting the UNEW4All initiative such as W@HCA, HydroSOS BaNe, community-based projects through CREWS initiatives. The APFM requests for active participation of the SBPs as well as identify new opportunities through GWP, particularly its Regional and Country Water Partnerships (RWPs and CWPs). These would be submitted to the relevant call for proposal or financial institutions such as European Horizon, Adaptation Fund, global environment facility or national foreign affairs of EWS4All supporting countries.

Furthermore, APFM will continue to collaborate regularly with the SBPs through the virtual SBP forum, for example, through webinars or meetings which will be held every 3-6 months. This would allow periodical engagement with the SBP network to provide updates, brainstorm and discuss possible ideas or synergies in project proposal development, expertise service, communication, and outreach.

Annex-1 List of IFM HelpDesk Requests between August 2023-August 2024

As per the recommendations of the Advisory and Management Committees of 2015, the lists of HelpDesk requests have been aggregated into a single list, independent of the channel through which the request has been received. Criteria on the consistency of aggregated data are provided at the beginning of Annex I in the APFM Annual Report 2015-2016 (APFM Report No. 39).

Since 2009, and as of August 2024, 666 requests have been received, averaging around 44 per year. Of these 668, 40 were not fully addressed due to inappropriate requests (e.g. request for conference sponsorship, withdrawal, spam, or lack of follow-up) from the requesting party. This translates into a rate of fulfillment of HelpDesk requests of around 94%.

As shown in Figure 1 the most abundant type of request has been the "rapid guidance" (349 requests – 52.40%), followed by capacity building (291 requests – 32.88%). The category "assistance for strategy" covers around one-sixth of the total requests 14.71% (98 requests) from 2009 to August 2024.

Regarding the requesting institutions, "International Organizations" (265 requests - 37.24%) is the category that made the most use of the HelpDesk, as shown in Figure 2. The remaining requests were from governmental agencies (24.47 %), universities or academic institutions (20.87%), NGOs or private consulting companies (16.97%), and from others[1] (0.45%).

[1] Others category include technical assistance provided to the group of expertise (for e.g. HELP check in the Annex 1- HelpDesk request 2018-2019 of the Annual Report 2018-2019 for more information) working on specific activities related Integrated Flood Management.

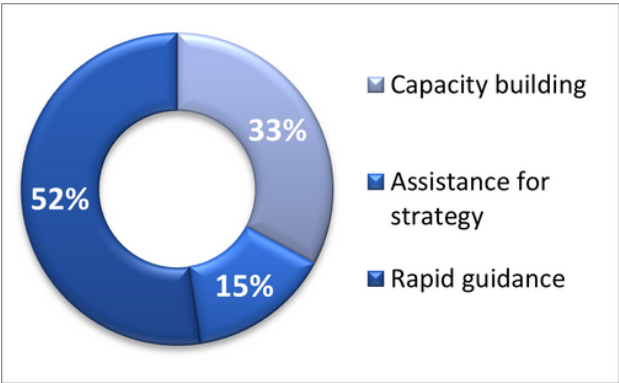


Figure 1: Percentage of requests by type between 2009-2024

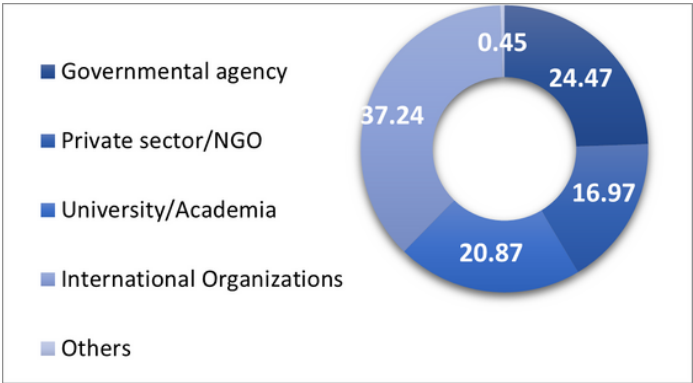


Figure 2: Percentage of requests by institution type between 2009-2024

The proportion of IFM Helpdesk remains relatively high (58 requests) this year but a bit less compared to the previous years with the number of requests, i.e., 2022-2023 (75 requests), 2020-2021 (62 total requests- 13 months accounted) etc. as shown in Figures 3 and 4.

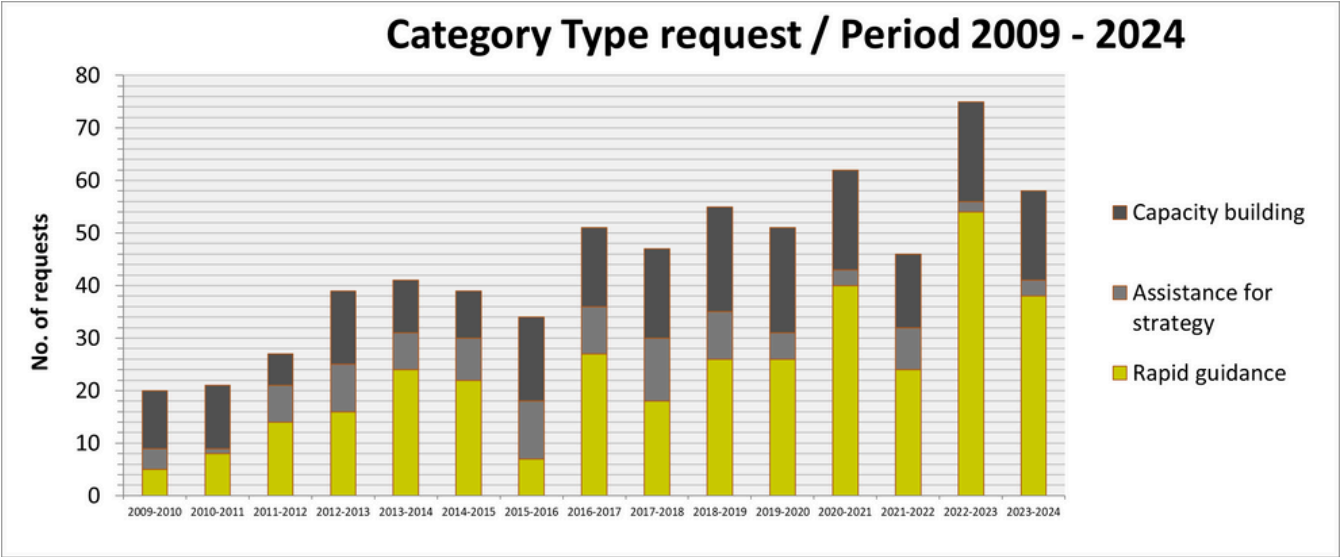


Figure 3. No. of requests among the three category types and reporting period (2009-2024)

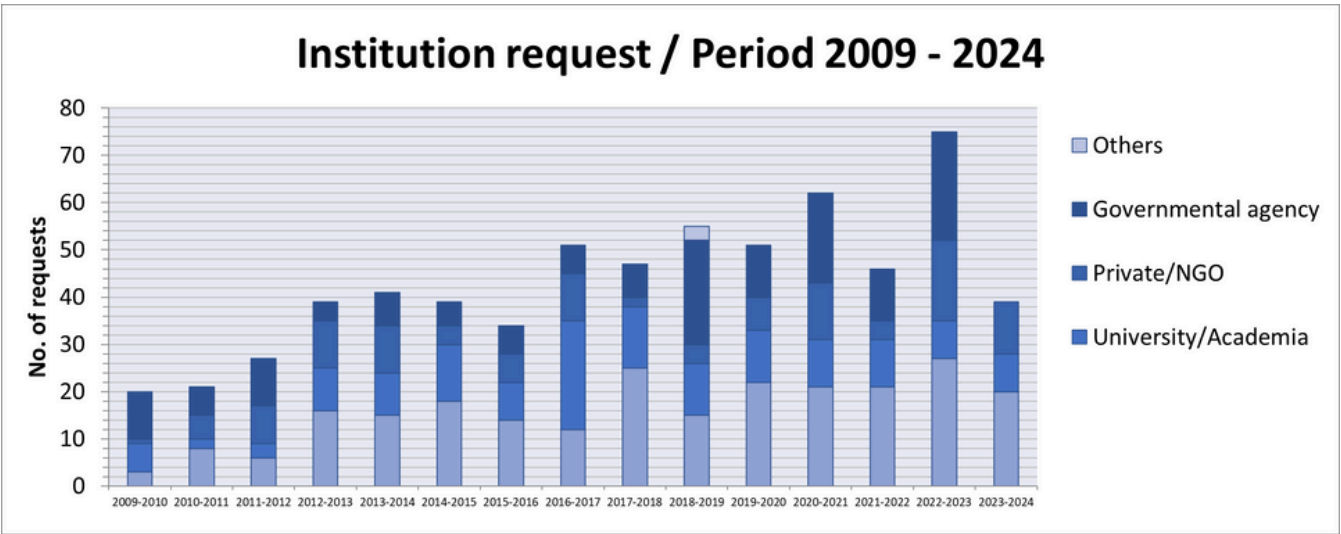


Figure 4. No. of requests by Institution requesting and reporting period (2009-2024)

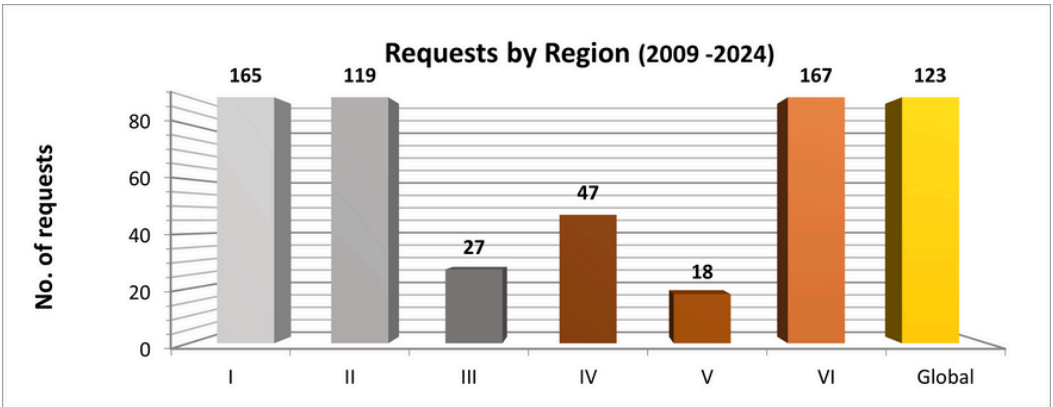


Figure 5. No. of requests by geographical distribution since 2009

In terms of countries targeted as a result of HelpDesk requests, Figure 5 shows Regional Associations (RA) VI Europe and I-Africa as the regions that have mostly benefitted from APFM interventions (167 and 165 requests requested since HelpDesk inception), followed by RA II – Asia (119 requests), RA IV (47), RA III (27) and RA V (18). In addition, 123 requests fall under the category “Global”, which might reflect activities impacting the global, regional or transboundary level. A distribution by year is provided in Figure 6.

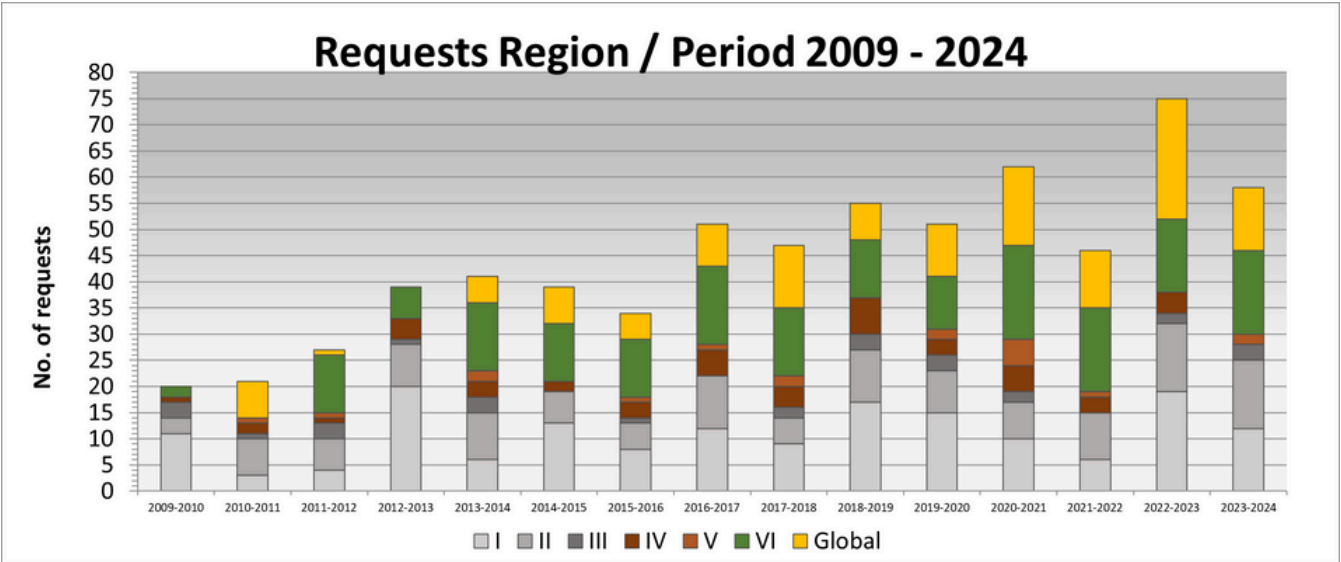


Figure 6. No. of requests by geographical distribution and reporting period

During the reporting period (August 2023-August 2024), 58 requests were received and most of them were responded to with necessary action: of these, 7 are either ongoing or action is planned for the next reporting period.

A brief summary of the 58 HelpDesk requests received in the reporting period is provided in the table below. The majority of the 58 requests have been addressed. Prior to this reporting period, 608 requests were made and documented in previous annual reports.

Requests received by TSU in the framework of the HelpDesk						
Requests		Received from 08/2023 to 08/2024			Status:	
(No 1-608)		not displayed (see previous annual reports)			554 Completed,36 discarded, 17 on-going	
No.	Date	Institution, Country	Category (Request came through HelpDesk form or contacts in WMO or in GWP)	Impact (Region or Global)	Type of request	Status
609	Aug-23	UNDP (International Organization)	Rapid Guidance (WMO)	Global	Technical backstopping on EWS for tender	Completed
610	Aug-23	BAFG Germany (Government Agency)	Rapid Guidance (WMO)	VI	Provide input for the workshop related to flood	Completed
611	Aug-23	Justweather.org (Private companies and NGOs)	Rapid Guidance (WMO)	V	Information to be posted on the APFM Website	Completed (Out of scope)
612	Aug-23	Foundation of River & Basin Integrated Communications, Japan (Private companies and NGOs)	Rapid Guidance (WMO)	II	Information on the WMO Hydrological structure	Completed
613	Aug-23	UNDP for Suriname (International Organization)	Rapid Guidance (WMO)	III	Request for information on FFGS and APFM	Completed
614	Aug-23	PMD, Pakistan (Government Agency)	Capacity Development (WMO)	II	Request for Dewetra	Ongoing (pending formal request from PMD)
615	Sept-23	HKV, Deltares and others (Private companies and NGOs)	Assistance for Strategy (WMO)	VI	Request for support in EC project proposal	Completed

616	Sept-23	FAO (International Organization)	Capacity Development (WMO)	Global	Request for participation in the Rome Water Dialogue	Completed
617	Sept-23	Unknown (Private companies and NGOs)	Capacity Development (WMO)	I	Support on plague or epidemics after Libya floods	Completed (Out of scope)
618	Sept-23	International Centre for Water Resources and Global Change (ICWRGC) – Germany (International Organization)	Assistance for Strategy (WMO)	Global	Involvement of APFM in flood and drought activities	Ongoing
619	Sept-23	Sejong University Republic of Korea (University and Academia)	Rapid Guidance (WMO)	II	Request for WMO support to the Korea Meteorological Administration (KMA) focused on climate, water and weather studies.	Completed
620	Sept-23	WHO (International organization)	Rapid Guidance (WMO)	II	Requested information on dzud + post-dzud flooding risk and data sharing in Mongolia	Completed
621	Oct-23	Nigeria Met Agency (Government Agency)	Capacity Development (WMO)	I	Overview of Hydrological activities and opportunities	Completed
622	Oct 23	Palestinian Met Department (Government Agency)	Rapid Guidance (WMO)	VI	Looking for contacts for EUMETSAT	Completed
623	Oct-23	ITU (International Telecommunication Union) (International Organization)	Rapid Guidance (WMO)	Global	Requesting to contribute to the webinar 'Disaster risk reduction in the digital transformation age: Leveraging emerging technologies'	Completed

624	Oct-23	UN-Water (International Organization)	Rapid Guidance (WMO)	Global	Review of document on Water, Climate Change and Disasters	Completed
625	Nov-23	Freelance journalist (Private Companies and NGOs)	Rapid Guidance (WMO)	I	Inquire on recent flood in Ghana	Completed (out of scope)
626	Nov-23	UNDRR (International Organization)	Capacity Development (WMO)	Global	Requeust to present at the COP28 on water-related hazards	Completed
627	Nov-23	Waterschap Noorderzijlvest (International Organizations)	Capacity Development (WMO)	III	Information related to the Early warning systems in Peru	On-going
628	Nov-23	RCUWM (Government Agency)	Capacity Development (WMO)	II	Capacity development training on IFM	Completed
629	Nov-23	Tensift Hydraulic Basin Agency, Marrakech (Government Agency)	Capacity Development (WMO)	I	Support in developing the Flood Early Warning System at Tensift Hydraulic Basin Agency, Marrakech	Completed
630	Jan-24	Supriya Upadhyay, Center for the Study of Regional Development, Jawaharlal Nehru University, New Delhi (University and Academia)	Rapid Guidance (GWP)	II	Review paper on vulnerbaility on flood and dorught in mountains	Completed
631	Feb-24	Hunziker, Malin, Business Ethics Institute of the University of St. Gallen (University and Academia)	Rapid Guidance (GWP)	VI	Research interview	Completed
632	Feb-24	Kevin Emslie, Qavah Earth (Private Companies and Academia)	Rapid Guidance (GWP)	I	Review GCF proposal	Completed
633	Feb-24	Armand Houanyne, GWP	Rapid Guidance	I	Review proposal	Completed

		WA (International Organization)	(GWP)			
634	Feb-24	George Sanga, GWP EA (International Organization)	Rapid Guidance (GWP)	I	presentation on drought and flood for 66th Greater Horn of Africa Climate Outlook Forum	Completed
635	Feb-24	Hilda Kemala, GRIPS (International Organization)	Rapid Guidance (GWP)	II	contribution to HELP Global Report	Completed
636	Mar-23	Ante, Tom D'Hayer (Private Companies and NGOs)	Rapid Guidance (GWP)	VI	Join side event at UN Water Conference	completed
637	Mar-24	Ministry of Water Resources, China (Government Agency)	Rapid Guidance (WMO)	II	Assessment of capabilities in E2E EWS for floods	Completed
638	Apr-24	ICOLD (International Organization)	Rapid Guidance (WMO)	Global	Looking for information on global scale models	Completed
639	March-24	PNGNWS (Government Agency)	Capacity Development (WMO)	I	Request for flood forecasting and EWS pilot project development in Papua New Guinea	On-going
640	March-24	Lilli Siedschlag (University and Academia)	Rapid Guidance (WMO)	VI	Educational material on IWRM	Completed
641	April-24	WHO ACE (World Health Organization, Asia Pacific Centre for Environment and Health in the Western Pacific Region (International Organization)	Rapid Guidance (WMO)	II	Seeking information on WMO Hydro-related activities	Completed
642	Mar-24	UN water	Rapid Guidance (WMO)	Global	Requesting to contribute to the UN-	Completed

		(United Nations Water) (International Organization)			Water Task Force on Country Level Engagement	
643	April-24	Biljana Kilibarda, Montenegro Hydromet (Government Agency)	Rapid Guidance (GWP)	VI	review GCF proposal	Completed
644	April-24	Ministry of Environment – Angola (Government Agency)	Assistant for Strategy (WMO)	I	Request for flood management strategy in Angola	Completed
645	April-24	Jimi van Schalkwijk, Vrije Universiteit Amsterdam (University and Academia)	Rapid Guidance (GWP)	VI	Interview request regarding flood and drought risk	Completed
646	May-24	Italian Hydrological Society (University and Academia)	Capacity Development (WMO)	VI	Request for keynote speech on flood management activities	Completed
647	May-24	SIAP-Micros (Private Company)	Rapid Guidance (WMO)	VI	Technical backstopping	Completed
648	May-24	UN Resident Coordinator's office – Kenya (International Organization)	Rapid Guidance (WMO)	I	Request for engineering solution to get rid of flood waters	Completed (out of scope – emergency operations)
649	May-14	National Center of meteorology, United Arab Emirates (Government Agency)	Rapid Guidance (WMO)	II	Requesting to share the technical information of Flood Forecasting Initiative at WMO and Global Best Practices with Gulf countries	Completed
650	May-14	IHE delft, Netherland (University and Academia)	Rapid Guidance (WMO)	VI	Requesting to share the WMO hydrology activities and experience with IHE delft MSc student	Completed
651	May-14	RAII CPH expert, Vietnam (Government Agency)	Capacity Development (WMO)	II	Requesting to conduct a webinar about the APFM presentation and Integrated flood Management (IFM) project proposal development for RA-II	Completed

					WMO Members	
652	May-24	IAEA (International Atomic Energy Agency) (Government Agency)	Rapid Guidance (WMO)	Global	Technical support for the safety report on effect of climate change on assessment of meteorological and hydrological hazards	Completed
653	May-24	SPREP (Secretariat of the Pacific Environment Programme) and PMC (Pacific Meteorological Council) (Government Agency)	Rapid Guidance (GWP)	V	Technical support to the Weather Ready Pacific during SID4 conference	Completed
654	May-24	UNDRR (International Organization)	Rapid Guidance (GWP)	Global	Technical contribution to the Investing in Resilience – The Business Case for Disaster Risk Reduction in SIDS	Completed
655	May-24	DHaeyer Tom, Antea (Private Company and NGOs)	Rapid Guidance (GWP)	VI	Technical expert Egypt EWS	Completed
656	June-24	Union of Community Development Volunteers (UCDV), (Private companies and NGOs)	Capacity Development (WMO)	I	Request for pilot project development in Uganda	Completed
657	June-24	EUMETSAT (Private Companies and NGOs)	Rapid Guidance (WMO)	VI	Request for governance indications on APFM	Completed
658	June-24	Elio Bottagisio (University and Academia)	Rapid Guidance (GWP)	VI	Request for interview	Completed
659	June 24	World Bank (International Organization)	Capacity Development (WMO)	III	Request for keynote speech on flood management for Chile	Ongoing
660	July-24	Ministère des Mines, de l'Eau et de l'Energie, Benin (Government Agency)	Capacity Development (WMO)	I	Request for pilot project development in Benin	On-going

661	July-24	UNITAR (International Organizations)	Capacity Development (WMO)	Global	Request for providing information on WMO activities and EW4All projects worldwide	Completed
662	July-24	NMDA, India (Government Agency)	Capacity Development (WMO)	II	Information on MHEWS available with WMO mainly for GLOF	Completed
663	July-24	IRIMO (Government Agency)	Rapid Guidance (WMO)	II	Request for support on lightning detection system. Share the request with relevant WMO colleague for follow-ups	Completed
664	July-24	GEO (Group on Earth Observations) (International Organization)	Rapid Guidance (WMO)	VI	Developing a proposal to include a pilot on urban flooding in the GEO (EU Horizon Urban Flooding)	ongoing
665	Aug-24	UK MetOffice (Government Agency)	Rapid Guidance (WMO)	RA	Information on FloodTags	Completed
666	Aug-24	Czechia Permanent Mission (Government Agency)	Capacity Development (WMO)	Global	Request for information on different WMO flood management projects	Ongoing

