



INTEGRATED DROUGHT MANAGEMENT PROGRAMME

Integrated Drought Management Programme (IDMP)

Activity Report 2021-22

**August 2022
Geneva, Switzerland**

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The **World Meteorological Organization (WMO)** is a specialized agency of the United Nations. It is the UN system's authoritative voice on the state and behaviour of the Earth's atmosphere, its interaction with the oceans, the climate it produces and the resulting distribution of water resources. WMO has a membership of 191 countries and territories.

www.wmo.int

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

www.gwp.org

The **Integrated Drought Management Programme (IDMP)** was launched by WMO and GWP at the High-Level Meeting on National Drought Policies in March 2013. The IDMP works with a wide range of partners with the objective of supporting stakeholders at all levels by providing them with policy and management guidance through globally coordinated generation of scientific information and sharing best practices and knowledge for integrated drought management. The IDMP is a contribution to the Global Framework for Climate Services (GFCS), especially with regards to GFCS priority areas of disaster risk reduction, water, agriculture and food security. It especially seeks to support regions and countries to develop more proactive drought policies and better predictive mechanisms.

www.droughtmanagement.info

1. Introduction and Executive Summary

This document reports on activities undertaken by the Integrated Drought Management Programme (IDMP), including its regional programmes, in the last two Quarters of 2021 and the first two Quarters of 2022. It also provides an overview of activities that are in the process of being implemented and planned as of September 2022 and provides a link to the IDMP 2022-25 draft strategy as an input to the discussions at the IDMP Advisory and Management Committee meetings in Stockholm in August 2022.

The Integrated Drought Management Programme was launched at the High-Level Meeting on National Drought Policies in March 2013. The IDMP Technical Support Unit (TSU) based at WMO is co-headed by Mr Bob Stefanski, the Head of the WMO Applied Climate Services Division. From GWP, Mr Valentin Aich, Senior Water and Climate Specialist seconded to WMO, is co-heading the TSU. Ms Katrin Ehlert, a Junior Professional Officer in the Applied Climate Services Division at WMO has been a member of the IDMP TSU since March 2019. Mr José Camacho, Scientific Officer in the WMO Applied Climate Services Division also supported the IDMP part time until his retirement from WMO in August 2022.

The IDMP in Central and Eastern Europe (IDMP CEE) is managed by Ms Sabina Bokal (who is replaced in 2022 due to maternity leave by Ms Anna Smetanova), supported by the GWP CEE office in Bratislava, Slovak Republic. Mr Gerald Kairu manages the IDMP Horn of Africa (IDMP HOA) at the GWP office for Eastern Africa in Entebbe, Uganda. Mr Armand Houanye manages the IDMP West Africa (IDMP WAF) at the GWP office for West Africa in Ouagadougou, Burkina Faso. Ms Guljamal Nurmuhammedova manages the IDMP regional programme for Central Asia and Caucasus (IDMP CACENA).

The IDMP builds on long-standing cooperation of WMO and GWP and is inspired by the Associated Programme on Flood Management (APFM) that is developing and applying the concept of Integrated Flood Management and provides support through a HelpDesk with the involvement of a wide range of partners. Discussions have been ongoing in the past year, to extend the HelpDesk to a joint APFM/IDMP HelpDesk for Integrated Water Resources Management.

The IDMP and the APFM are both contributions to the Global Framework for Climate Services (GFCS). The GFCS bridges the gap between climate information producers and the practical needs of policy makers, planners and other users, such as farmers, water managers, and health workers. It aims to facilitate climate-smart decisions and the APFM and IDMP HelpDesks have been offered as mechanisms to support the GFCS in this endeavor.

The IDMP's objective is to support stakeholders at all levels by providing them with policy and management guidance through globally coordinated generation of scientific information and sharing best practices and knowledge for integrated drought management. The IDMP especially seeks to support regions and countries to develop more proactive drought policies and better predictive mechanisms. While the spatial scope is global, the results of the IDMP are aimed to be practical and policy relevant - tailored to specific regional and national needs and requirements.

One of the main areas of work has been on supporting the regional activities of the IDMP and develop an open and inclusive platform, which can foster synergies among partners and close gaps.

With this focus of the programme, several actions have been taken in the ninth year of operation of the IDMP, which are discussed in more detail in the report:

- The HelpDesk with its “Ask”, “Find” and “Connect” functions has seen its fourth year of operation. In total 254 requests have been recorded and largely completed by the IDMP TSU with support from partners with 30 received during the reporting period (see section 2.13).
- The IDMP TSU has continued the IDMP Virtual Exchange platform as a means to increase interaction with and between IDMP partners and 2 virtual exchanges have been carried out in 2022 (see section 2.1)
- Collaboration with several UNCCD drought-related activities and FAO WASAG Working Group on Drought Preparedness is moving forward with significant results from UNCCD COP-15 to support countries in drought planning and raising the profile of integrated drought management (see section 2.3)
- In response to the top priority recommendation from the 2021 annual meetings, the IDMP TSU has started activities to support the provision of guidance on drought impact collection (see section 2.8)
- An International Organizing Committee has been established for the organization of a HMNDP+10 in 2023 to review progress made in IDM since the HMNDP in 2013 (see section 2.6)
- Several publications of resources and approaches on integrated drought management with IDMP participation have been published in 2021/22 (see section 2.9.2-4)
- The IDMP is developing several publications strengthening the understanding of integrated drought management and the Three Pillars of IDM (section 2.7.5-6)
- Cooperation with and advice to the IDMP in Central and Eastern Europe that has been operational since early 2013 (see section 2.11.1), the IDMP in the Horn of Africa (IDMP HOA) operational since September 2014 (see section 2.11.2), West Africa (IDMP WAF) operational since January 2015 (see section 2.11.3), and Central Asia and Caucasus (IDMP CACENA) which started in 2021 (see section 2.11.4).
- The IDMP TSU is also developing several project proposals in order to receive funding for the implementation of integrated drought management in the Mekong and Drin basins, and Central Asia region (see section 2.11.6-8).
- The IDMP website is being periodically updated and improved to serve as the knowledge repository and display as well as interaction platform for the IDMP (see section 2.14).
- The IDMP TSU has been working on a draft strategic plan for the coming 3 years of implementation. This plan includes several goals and activities that will advance the programme in serving stakeholder’s needs for support in proactive and integrated drought management (see section 3)
- The IDMP has received financial support from NOAA in the reporting period, which enabled several projects in the IDMP regions (see section 2.11) and on the global level (including capacity building and outreach).

With the intent of keeping the Annual Report as concise as possible, the reader is invited to refer to previous Annual Reports and decisions taken at previous meetings (available on the IDMP [Advisory and Management Committee meeting website](#)).

2. Activity Report 2021-2022

The table below outlines the action taken upon the recommendations received by the Advisory Committee and decided by the Management Committee in 2021. In addition to the activities mentioned in the table, the IDMP TSU and the regional programmes have also been involved in other activities, as detailed in the activity report at hand. The recommendations are listed according to priority ranking by the management committee. Please refer to the [2021 IDMP annual meeting report](#) for more information about the recommendations.

	Main recommendation	Specific recommendations	Status as of August 2022
1	Prepare actionable guidance on drought impacts	<p>Focus more on and characterize the linkages between droughts and their impacts to help increase the efficiency of early warning systems</p> <p>Address data gaps (climate vulnerability, drought impacts) - low-data contexts - especially for access to finance (e.g. GCF)</p> <p>estimate the quality of yield impacts of drought - involve academics, users and agriculture</p> <p>the lack between drought and their impacts need to be modelled. Data is needed for that purpose, but often dispersed among different institutions not normally cooperating</p> <p>Impact assessment – verify available tools, assess the quality of tools</p> <p>Identify drought impact indicators</p> <p>Include all aspects: social, economic, and environmental aspects are interconnected. A combination of the impacts on these three aspects, considering also agromet and hydr aspects, would be beneficial</p> <p>Bring the monitoring of different drought impacts together – ecological, hydrological, agricultural - enhance exchange between disciplines on this</p> <p>impact collection: some programs are exploring public participation (e.g. example from Nebraska, citizen science monitoring - CIMO; another similar one is in the Alps and others in Queensland). Try to explore further this topic linking the best practices from around the world</p>	<p>- Collaboration with NDMC on baseline assessment on drought impact collection, to be further developed to guidance material</p> <p>- Partnership with the Bright Foundation on data scraping services to be used for a pilot global impact monitor on the IDMP website</p>
2		Focus on how to assess risk	

	Focus more on drought forecasting and monitoring	Support of existing regional and national drought monitors and development of new monitors	<ul style="list-style-type: none"> - HelpDesk support for Fiji Met Service on drought hazard mapping - possible regional extension and guidance document - Support to HydroSOS soil moisture and drought component -IDMP CEE extended droughtwatch.eu to three new countries, Albania, Kosovo and North Macedonia
		More information/activities on forecasting	
		Integrate satellite and ground-based monitoring	
3	Enhance IDMP as platform for engagement	IDMP as face for IDM	<ul style="list-style-type: none"> - Virtual Exchanges as platform for IDMP partners to exchange; - Increased interaction with WMO regional office Singapore (CA drought proposal)
		Start process to connect partners' work closer within IDMP framework	
		Promote collaborations (bring communities together)	
		Connect partners more to situation on the ground	
		be a platform for all existing initiatives	
		make use of the Singapore WMO regional office to increase visibility to the IDMP	
		Issue: Fit-for-purpose solutions-challenge matching (Menu of technical solutions already exists) (see APFM SBP Catalogue of Services)	
		Find out what is possible in terms of coherence in the effort and bringing all efforts together, coherence is lacking	
4	Prepare actionable guidelines for pillar 2	Impact emerging from guidance on Pillar 2 - Vulnerability & Impact Assessment	<ul style="list-style-type: none"> - Collaboration with NDMC on baseline assessment on drought impact collection, to be further developed to guidance material - Further work on BACI is pending
		Demand for vulnerability assessment weak - create demand (sensitize govts - Benefits of Action, Costs of Inaction, BACI)	
		IMPLEMENTATION - Govts want to see action on the ground, i.e. application of guidelines	

5	Implementation of existing plans and documents has to be reinforced		<ul style="list-style-type: none"> - Workshops on IDM have been held in Armenia and Uzbekistan with the goal to start/renew governmental efforts on drought preparedness - in Armenia there are discussions with the ministry to use GCF funding to develop and implement a drought policy - In Uzbekistan a report on drought was prepared and workshops held. As a next step the goal is to include drought stonger in the national water strategy and implement national drought management
6	Focus on Community-based/stakeholder focused solutions	<ul style="list-style-type: none"> Bottom-up approach is crucial There is a wealth of expertise in the govt which is not integrated – this needs to be done in projects/initiatives Implementation should be tailored to stakeholders Focus more on vulnerable groups, e.g. gender work IDMP can be the glue to bring together knowledge, stakeholders & communities and innovation – bottom-up approach 	<ul style="list-style-type: none"> - Community-based solutions are integral part of IDM project proposals -Workshop and training on gender and drought launched by GWP EA - Plan to include a module on gender and drought based on the materials in the overall training plan
7	Update guidance documents on Pillar 1 - Monitoring & Early Warning	<ul style="list-style-type: none"> Demand for EWS guidance exists IMPLEMENTATION - Govts want to see action on the ground, i.e. application of guidelines 	pending
8	Focus on NBS and participatory approaches	<ul style="list-style-type: none"> Bring in indigenous knowledge, support of biodiversity – community-based solutions Integrate NBS into preparedness approaches 	<ul style="list-style-type: none"> - Initiated collaboration with IUCN and Deltares on Nature-based solutions for drought

9	Social components (sociology, psychology, communication) to be integrated	how are people dealing with drought? a lot of focus has been put on institutional aspects, but not enough on social aspect	- Stronger focus during project development, e.g. for Lake Chad proposal
		A suggestion would be around demonstrating socio-economic value/benefits to national government to ensure policy is created to implement and sustain (including resources) projects	
10	Gather success stories at all scales		Competition was held together with APFM, the GWP toolbox and the Water and Climate Coalition on success stories. These will be displayed on the website and connected to the GWP toolbox.
11	Promote and scale-up the HelpDesk	Start process to increase awareness and branding for the HelpDesk	- Discussions on extension of IDMP HelpDesk to joint IDMP/APFM HelpDesk (MC decision)
		Make clear that HelpDesk can support all aspects of IDM	
		Improve access / clarity about functioning of the HelpDesk	
		Provide advise which indices used for which application/region etc.	
		Technical capacity building, focus on composite indices	
12	Focus on new and innovative training activities	Hybrid	- Development of e-learning modules on IDM started: Introduction to IDM and monitoring and EW, ongoing work to launch self-paced courses with UNEP-DHI and CapNet
		Training of trainers	
		Find out what kind of capacity building support and measures is needed	
		Pilot projects on training and formal education could be worth in funding	
		Apps development	

13	Engage youth		- Water Youth Network is a SBP, 3 volunteers identified for the IDMP to support communications, pilot on impact collection, and other activities. - A youth competition was held together with the WYN and APFM on small projects on EWS and the two winning projects are currently implemented in Indonesia and Tanzania.
14	Raise more awareness for IDMP in research community	AGU /EGU presence	- needs further discussion with research partners TSU is liaising with EU JRC Task Force on Drought and Water Scarcity
		Pantha rei, Anthropocene engagement	
		There is a need to bridge the gap between innovation and application – it is hard to get (innovative/new) measures adopted	
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		There is a need to bridge the gap between innovation and application – it is hard to get (innovative/new) measures adopted	
15	Research in ground water security is needed		pending

2.1 Partner engagement and Community of Practice on Drought

The IDMP currently has [43 partner organizations](#) out of which [16 organizations](#) completed the information required for Support Base Partners of the IDM HelpDesk with two organizations pending to do so. New partners added in 2021-22 were the IHE Delft, the Bright Initiative, and the Water Youth Network (all SBP). The addition of CIMA Research Foundation to the IDMP partner network is underway.

In addition, there is an update to the MoU between FAO and WMO which highlights many issues including strengthening cooperation on drought activities especially in relation to the IDMP and FAO’s Global Framework on Water Scarcity in Agriculture (WASAG).

As a result of the 2019 IDMP ACMC meetings, the IDMP TSU has launched IDMP Virtual Exchanges in 2020. This format comprises a series of virtual meetings on the current status of IDMP and partner work and

other drought-related topics of interest. So far, eight virtual exchanges have been successfully held with excellent partner input and feedback. More information can be found on the [IDMP VE page](#).

The IDMP TSU is actively engaging in efforts on building communities of practice within GWP and WMO. GWP has recently launched a new community of practice [toolbox](#) with massively extended functionalities. IDMP is collaborating and exploring how to use this best for disseminating information and knowledge on integrated drought management.

2.2 WMO/GWP IDMP institutional developments

The restructuring of WMO governance bodies which followed decisions taken during the 18th WMO Congress in 2019 is completed and the newly formed technical Commissions (Commission for Observation, Infrastructure and Information Systems (Infrastructure Commission) and Commission for Weather, Climate, Water and Related Environmental Services and Applications (Services Commission)) are working in the current term 2020-2024 (see section 2.4). Within the Services Commission, the Standing Committee on Services for Agriculture (SC-AGR) is main body working on drought issues in conjunction with committees on hydrology, climate and DRR (see section 2.4).

Further WMO bodies relevant for the IDMP are

- [Hydrological Coordination Panel](#)
- Climate Coordination Panel
- [Water and Climate Coalition](#)

More information about Hydrology in the WMO mandate can be found [here](#).

In June 2019, a Memorandum of Understanding was signed between WMO and GWP to increase the organizations' long-standing partnership. It was signed on 6 June 2019 during the opening of the Hydrological Assembly held at the Eighteenth World Meteorological Congress.

The MoU has the objective to further strengthen collaboration on the joint initiative programmes on integrated drought (IDMP) and flood (APFM) management.

The new WMO/GWP MoU identifies four priority areas for strategic collaboration:

- Strengthen the management of hydro-climatic extremes through the joint programmes on drought (IDMP) and flood (APFM) management;
- Strengthen the capacity of countries to develop high priority bankable water and climate projects;
- Strengthen stakeholder engagement on developing water information and products at the regional and country level through on-going collaborations with other WMO programmes ([GFCS](#), [HydroSOS](#), [HydroHub](#), World Water Data Initiative (WWDI)).
- Joint programmes, project development, service delivery and joint resource mobilization such as the joint preparation and implementation of the flood and drought management project in the Volta Basin.

GWP's Sponsoring Partners have selected Mr. Pablo Bereciartua, President of the Argentinean Engineering Centre (Centro Argentino de Ingenieros – CAI), as Chair of GWP. The appointment is effective July 1, 2022. The outgoing Chair, Mr. Howard Bamsey, after four years at the helm, announced earlier this year his intention to step down.

Another important success for GWP was the launch of the revamped GWP [ToolBox – IWRM Action Hub at World Water Day](#) of the 9th World Water Forum in Dakar, Senegal. Months in the making, this new platform is a step-change in providing knowledge and action for water resources management. After consulting a wide range of users, the GWP ToolBox is anchored in three pillars: LEARN, EXPLORE, and CONNECT. The ToolBox was presented at a Learning Lab in the Youth space (“How to solve water conflicts”) and at a session on “Providing water information to decision makers.” During the session the MINIMAX competition called for innovative water and climate solutions that MINIMISE the negative impacts of hydroclimatic extremes and MAXIMISE social, economic, and environmental benefits. IDMP was engaged in organizing this competition and the [four winners](#) will present their MINIMAX solutions during the Stockholm World Water Week in August 2022 as a recognition and celebration for their innovative thinking.

2.3 Collaboration with UNCCD and FAO

WMO and GWP are co-leads together with UNCCD and the University of Nebraska in the FAO Water Scarcity in Agriculture (WASAG) working group on Drought Preparedness. WMO and IDMP participates in WASAG activities as needed. In addition, WMO and FAO have signed a MoU in 2017. The joint action resulting from this MoU is updated in a yearly workplan between WMO and FAO.

Since UNCCD COP-13, the UNCCD has steadily increased its focus on drought management with the following important decisions. The IDMP has been strongly involved together with partners in the implementation of drought-related UNCCD initiatives:

- COP-13: Implementation of a **Drought Initiative** (DI) for the biennium 2018-2019 (Decision [29/COP.13](#))
- COP-14: [Intergovernmental Working group](#) (IWG) on effective policy and implementation measures for addressing drought under the UNCCD ([Decision 23/COP.14](#))
- COP-14: Second term of the **Science and Policy Interface** (SPI) with an objective on drought according to ([Decision 18/COP.14](#))
- COP-14: Establishment of a **monitoring framework for the UNCCD strategic objective on drought** was decided ([Decision 11/COP.14](#))

In 2022, [UNCCD COP-15](#) was held in Abidjan, Ivory Coast. The IDMP was strongly involved in several side events during thematic days and also contributed to both IWG and SPI during the past term. More specifically:

- The IWG presented its final report, a “Blue Paper” (available [here](#)) during COP-15. Based on the review of the IWG work the COP-15 decided on the second term of the IWG in the triennium 2022-2024 ([Decision 23/COP.15](#)) and that it will be tasked with identifying and evaluating all options, including, inter alia, global policy instruments and regional policy frameworks, and linking, where relevant, to national plans, as appropriate, to effectively manage drought under the Convention, including supporting a shift from reactive to proactive drought management. The call for IWG membership was distributed to IDMP partners in August 2022.
- With COP-15 also the work of the SPI in its 2019-2022 triennium concluded. The technical report on methodologies for the assessment of communities’ and ecosystems’ resilience to drought was presented with recommendations to the Committee for Science and Technology (CST) (available online soon) and several decisions were based on the work done by the SPI. Among others, the

COP invited parties to seek support from the IDMP with their work on proactive integrated drought management and with the further development and implementation of resiliency assessments ([Decision 17/COP.15](#), 3 and 4). In addition, cooperation of the SPI with the IDMP on scientific issues related to drought was decided ([Decision 17/COP.15](#), Annex). The new work program foresees the development of science-based evidence for regional and global aridity trends and future projections. The IDMP, through the WMO was invited to participate as observer in this new triennium 2022-24.

- The IDMP was also involved in the following thematic days:
 - The **Drought Day** discussed how to transform political commitments to action on drought resilience. Effective policies and projects on the ground from all regions around the world were showcased. A video message from WMO SG was presented at the high-level opening of the day, highlighting WMO's work on drought and EWS. The IDMP was present during the entire day and presented regional work in the session on Early Warning and Action Systems. In the session Towards a High-level Meeting on Drought 2023 (HMNDP 2013 +10), major achievements of the IDMP and close IDMP partners UNCCD, NDMC, IWMI and FAO were presented. The session collected input from the audience on the organization of the HMNDP+10 conference. In addition, the [Drought and Water Scarcity](#) publication (WMO No. 1284) was launched with a short presentation during Drought Day. Drought Day was covered by the media here: <https://enb.iisd.org/rio-conventions-pavilion-unccd-cop15/11-may-2022> .
 - The title of the **Science Day** at COP15 was *Land Degradation and Drought – from Science to Action*. The day was divided into land restoration sessions in the morning and drought preparedness sessions in the afternoon. Three sessions in the afternoon explored drought risk, measuring drought resilience and a closer look at Nature-based Solutions for drought. The day was covered by the media here: <https://enb.iisd.org/rio-conventions-pavilion-unccd-cop15/14-may-2022> a video recording is available here: https://www.youtube.com/watch?v=cUjTUO_1ip4

In order to leverage the work initiated by COP14 decisions, FAO and UNCCD have jointly developed and launched a project with GEF funding hosted by FAO and called “Enabling Activities for Implementing UNCCD”. The IDMP is partner to all four work packages:

- Supporting Intergovernmental Working Group on Drought
- Enhancing the Drought Toolbox
- Enabling the implementation of the national drought plans
- Drought vulnerability assessment and preparedness for mitigation measures

The project was launched in May 2021 with a duration of three years. The IDMP has been asked to contribute to component 3 of the project, discussions are ongoing.

Further discussions are ongoing regarding the co-branding of UNCCD activities as part of IDMP.

2.4 Work of the WMO Services Commission

Under the umbrella of the WMO [Services Commission](#), the Standing Committee on Hydrology ([SC-HYD](#)) under the leadership of Marcelo Uriburu Quirno (also Vice-chair of SC-HYD) added two activities related

to the IDMP into their workplan. Activity 8 is directed to providing scientific and technical advice to the WMO/GWP IDMP and to represent WMO hydrological community at the IDMP governance meetings. Marcelo Uriburu Quirno is also providing support and advice for the activity 7 (APFM) and ensuring there is a linkage between both programmes and that the work is aligned with the deliverables of other Standing Committees of the Services and Infrastructure commissions of WMO.

The Standing Committee on Services for Agriculture ([SC-AGR](#)) continues the work of the former Commission of Agricultural Meteorology and provides scientific and technological guidance to WMO Members in the sectors of agriculture, forestry, livestock and fisheries, not only for food production but also for agricultural meteorological risk governance in terms of agro-ecosystem resilience and sustainability, especially with higher priorities on climate services and capacity development. The SC-AGR is chaired and co-chaired, respectively, by Prof. Roger Stone and Dr. Elena Mateescu.

Under the Services Commission, the Standing Committee on Services for Agriculture (SC-AGR) hosts the expert team on drought ([ET-DRG](#)). The ET-DRG is led by Andrea Susnik and Christa Pudmenzky and brings together international drought experts with a focus on regional and gender balance. Linkages are established with other Standing Committees under the Services Commission on Disaster Risk Reduction, Climate and Hydrology. The ET-DRG has been mandated by WMO members, for the current term until the 2024, with the following expected outputs:

- A report that summarizes global drought impacts, preparedness, resilience, management, policy, and effective user-engagement practices.
- A report on the status of drought-monitoring systems, outlooks, impacts, assessment of possible agricultural yield losses due to drought and preparedness in the WMO regions.
- Guidance material on how to clearly communicate the existing definitions of drought, drought triggers, the various components of the lifecycle of drought, in cooperation with SC-HYD (Hydrology);
- A framework and standards for a Global Drought Classification System to be included in GMAS (Resolution 17 (Cg-18)).
- Updated Handbook of Drought Indicators and Indices (WMO No. 1173) in conjunction with the WMO/GWP Integrated Drought Management Programme (IDMP) and in cooperation with SC-CLI, SC-HYD and SC-DRR.

2.5 Global Multi-Hazard Alert System (GMAS) and Global Drought Information System (GDIS)

At the 18th Meteorological Congress in June 2019, the following resolutions were approved: Resolution 16 (CG-18) - Guide(s) on the Support of National Meteorological and Hydrological Services to their National Multi-hazard Early Warning Procedures, Coordination Mechanisms, Systems and Services and Resolution 17 (CG-18) - Ensuring Integration of Drought Risk Management in WMO activities ([pages 77 to 79 of Cg-18 report](#)). The Resolution 17 decided to develop a Global Drought Indicator (GDI, now renamed to: Global Drought Classification System, GDCS) as input into WMO activities such as the proposed Global Multi-hazard Alert System (GMAS), Common Alerting Protocol (CAP), Global Hydrological Status and Outlook System (HydroSOS), and cataloguing of high impact events and that information on the outcomes of these

efforts be provided to UNCCD in support of relevant UNCCD decisions. This Resolution is linked to UNCCD CST draft decision described in section 2.3 above.

The SC-AGR ET-DRG has been mandated with the development and implementation of the GDCS and is currently drafting an implementation plan for the GDCS.

With regards to the Global Drought Information System (GDIS), there are going discussions with WMO, NIDIS, GEO and the US National Centers for Environment Information (NCEI) on the status and future of this initiative.

2.6 HMNDP+10

The [High-Level Meeting on National Drought Policy](#) (HMNDP) in 2013 was the origin of the IDMP and also a defining moment for many of its partners that raised global awareness about the need for proactive drought management. Taking up a recommendation of the AC/MC meetings in 2020, the IDMP and co-organizers of the HMNDP 2013 decided to organize a follow-up to the 2013 conference – HMNDP+10 in 2023. The process of organization and pre-events are coordinated by the IDMP TSU. The purpose of the conference will be to assess progress and achievements with integrated drought management and to look ahead to define the focus of the work ahead. An international organizing committee was established and more information about its terms of reference and composition can be found [here](#). A timeline leading up to the conference in 2023 and budget are currently under development.

The first event organized in preparation for HMNDP+10 was held at UNCCD COP-15 in Abidjan, looking back at the achievements since HMNDP 2013. Resource materials for the HMNDP+10 are on the IDMP website [here](#).

The next upcoming event at World Water Week will focus on looking ahead and collect input on future directions of Integrated Drought Management to be discussed during HMNDP+10. [Here](#) is the link to the event on 31 August 2022.

2.7 EPIC Response second phase support

The global flagship report “[An EPIC Response: Innovative Governance for Flood and Drought Risk Management](#)” was launched in June 2021. The report provides a new perspective on hydro-climatic risks by looking at floods and droughts through the same lens. It identifies the roles of different government agencies in managing these risks and highlights where and how these agencies need to collaborate. The phase 2 of the workstream seeks to operationalize the content of the EPIC Response Framework assisted by a newly developed EPIC Response Assessment Methodology and to help apply it in specific country contexts with the goal of improving policy dialogue and operations.

The IDMP TSU, together with the APFM TSU, is supporting this pioneering work by organizing dissemination activities through the GWP Country Water Partnerships to raise more awareness about the EPIC Response Framework in WB client countries and international community. Hybrid technical workshops have been designed to include content on drought and flood management as well as the EPIC R approach and will be held in Ghana and in India in the fall of 2022. There will also be an IDMP Virtual Exchange dedicated to integrated governance of floods and droughts later in 2022.

2.8 Workstream on Drought Impact Collection

The development of guidance on impact assessment was ranked top priority in the recommendations received by AC in 2021. The IDMP TSU has taken action in developing a baseline report on impact collection in collaboration with the NDMC. The first draft will be shared in Q3 of 2022 with stakeholders for their feedback and input. This baseline report will serve as the first assessment on available data and practice on which a guidance document will be based. The goal is to use this baseline report to come up with practical guidelines for countries and other stakeholders on how to assess impacts and collect impact data.

In addition, the [Bright Initiative](#) approached the IDMP and APFM with an offer for collaboration. The Bright Initiative is a global organization providing NGOs, NPOs, academic institutions & public bodies with pro-bono access to leading data technology and expertise to drive positive change and it is a new partner of the IDMP. The IDMP TSU, with help from the Water Youth Network, is planning to develop a prototype of a global impact monitor based on media and social media data obtained through the Bright Initiative that will be hosted on the IDMP website. A respective Letter of Agreement is currently signed and further updates will be provided.

2.9 IDMP Publications and contributions

2.9.1 Knowledge resources on the three pillars of IDM

Following the recommendation of the IDMP ACMC meetings the IDMP continues to update information on practical applications of integrated drought management structured by the three pillars as part of the resources made available in the HelpDesk. Partners are encouraged to submit any of their tools or products they wish to highlight. <https://www.droughtmanagement.info/pillars/>

In addition, the IDMP is curating drought management related publications in its library (<https://www.droughtmanagement.info/find/library/>) and IDMP tools can be found here: <https://www.droughtmanagement.info/find/guidelines-tools/>.

2.9.2 Knowledge product on water scarcity and drought

The IDMP TSU, with the support of the IDMP partners has developed a concept paper on Drought and Water Scarcity during the past years. The paper outlines the differences between the two phenomena and how they interact, as impacts are often the same. Along with the presentation of selected case studies and initiatives, it features approaches to cope with both drought and water scarcity as their impacts can be mitigated and managed through Integrated Water Resources Management. The document was launched at UNCCD COP-15 and is available [here](#).

2.9.3 Knowledge product on the 3rd pillar of IDM: Drought Mitigation, Preparedness and Response

The IDMP, with financial and technical support from FAO, has developed a knowledge product on the 3rd pillar of IDM. This publication contains information and guidance on drought risk mitigation, preparedness and response along with a number of case studies, and complements existing publications on the 1st and 2nd pillar of IDM. The knowledge product was launched at UNCCD COP-15 and is available [here](#).

2.9.4 HELP Flagship report

The High-level Experts and Leaders Panel on Water and Disasters (HELP) publishes an annual report and approached GWP/WMO with a request to contribute with an article. The IDMP suggested a publication on combined effect of drought and heatwaves in Central Asia in the summer 2021 and current activities in regard of a regional drought mechanism, which will also include the current efforts of IDMP in the region. The report is available [here](#).

2.9.5 IDM framework document

The development of a framework paper to serve as the intellectual framework of the concept of integrated drought management, the Three Pillar approach. It is a synthesis of existing publications around the topic to succinctly define the concept and approaches to integrated drought management focusing on the three pillars of integrated drought management. The final review of this draft document has been completed and the framework paper will be published after final editing later in 2022.

2.9.6 IDMP/APFM concept paper on Integrated Drought and Flood Risk Management

In continuation to the work stream on the 3rd pillar knowledge product, FAO has provided funds to the IDMP to elaborate a concept paper on technical challenges and opportunities of integrated flood and drought management. A first draft was developed and is undergoing editing and further development. It is planned to be finished at the end of 2022.

2.10 Capacity building

Capacity building is a major objective of the IDMP. Recent efforts have been the revision of the [UNDP CapNet Drought Management manual](#) in 2020. Since then, discussions have been ongoing with UNDP CapNet to build online courses based on the manual.

Following a HelpDesk request from the [Volta Flood and Drought Management project](#) (see also sections 2.11.3 and 2.11.5 for updates on the Volta project), the IDMP has developed an online course including an introduction to the drought concept and its monitoring and early warning for the western African region. The course was very well received with good feedback from the participants and a completion rate of around 80% (153 certificates issued).

Based on this success, a follow-up collaboration with UNDP CapNet and UNEP-DHI Centre will develop the existing modules into a global course to be freely available on the IDMP website (and the UNDP CapNet online campus) for one year. Further IDMP content will be developed as online course depending on requests and availability of funds. (See also the IDMP 2022-25 strategy).

2.11 IDMP Regional Initiatives and projects

The IDMP regional project managers for the IDMP CEE, IDMP HOA, IDMP WAF and IDMP CACENA are in constant exchange with the TSU and are featuring regularly in the IDMP VEs with updates of their important work. The core funding received by NOAA has been used to leverage existing plans and project ideas in the regions as described below. Regular calls to share experiences, learn and plan jointly are planned for the new reporting period 2022/23.

In addition to the regional programmes, the TSU has developed several project ideas and concepts during the reporting period. In the context of hydrological and climatological extremes, several project concepts deal with the integration of flood and drought risk management. The TSUs of both IDMP and APFM, both hosted at WMO, are working closely together to develop joint approaches.

The following provides a brief summary of the activities carried out by the IDMP regional initiatives during the reporting period, as well as IDMP activities in other parts of the world and it gives a brief overview of ongoing project scoping and development activities.

2.11.1 IDMP Central and Eastern Europe (IDMP CEE)

GWP CEE supports drought management in the Drin Basin and Armenia:

GWP CEE capitalized on Integrated Drought Management Programme practices to enhance the outcomes of two transregional drought-related projects in the Drin basin and in Armenia. Both projects secured their funding via the National Oceanic and Atmospheric Administration (NOAA).

- IDMP for **Drin Basin** Project was a project funded by NOAA funds via GWPO from January to August 2022. The objective of the project was to further advance IDM in Drin Basin countries - North Macedonia, Albania, Kosovo. The project capitalized on the solution developed by DriDanube project and other IDMP CEE activities since 2011.
- The goal of the IDMP project, initiated and implemented by Country Water Partnership **Armenia** (CWP Armenia) and GWP CEE, was to identify the existing legal, institutional and management gaps in drought control sector in the country, to clarify the directions of drought monitoring, early response, risk management and consequence elimination systems and to develop the content of the integrated drought management plan model jointly with the stakeholders. While the partners identified weaknesses and gaps of the system and suggested pathways for IDMP content, GWP CEE started with a preparation of a set of suggestions for possible outline of IDMP within the scope of Armenia as well as prepared a check list for the survey on current status of drought management.

More information about both projects and outcomes can be found [here](#).

In addition, in August 2022 the [Visegrad Fund](#) has approved a small 14-month project starting this autumn: Knowledge transfer on drought issues due to climate change for Armenia. In the project, GWP CEE partners with CWP Armenia, GWP Hungary, GWP Poland and CzechGlobe.

In the autumn of 2022 GWP CEE will also start a 1-year project funded by Slovak Aid - Integrated drought management system and measures to minimize the effects of climate change in Kosovo.

2.11.2 IDMP Horn of Africa (IDMP HOA)

Activity 1: Improvement of the Regional Drought Early Warning System Prototype

- Carried out consultations in the IGAD region targeting Djibouti, Kenya, Sudan and Uganda on the regional prototype building on the IGAD Climate Prediction and Application Centre ([ICPAC](#)) [East Africa Drought Watch](#)¹. The feedback provided by the countries has enabled an improvement in the system. These include activating several functionalities to ensure useful early warning information is derived

¹ The [East Africa Drought Watch](#) uses satellite data, models and weather station data to continuously monitor drought at near-real time through a combined drought indicator that is based on three indicators a) precipitation anomalies, b) soil moisture anomalies and c) vegetation anomalies

from the system. Overall, the customizations involved downscaling of system functionalities to address national level needs. Table below shows summary of improvements to the East Africa Drought Watch during this reporting period.

#	Before	After Improvement
1	Local data was not incorporated due to poor resolution	The resolution is improved and incorporates local data blended with satellite
2	The original version did not bear the filtering option by country(ies)	There is filtering option that allows to focus on county of interest
3	The level of risk could only be done at regional level	The level of risk can now be done at National and sub-national level
4	Report and analysis could only be done at the national level	Report and analysis can be done at Sub- national level
5	Only 10-day Combined Drought Index analysis	Both 10-day and Monthly Combine Index Analysis

Activity 2: Feedback mechanism for Early Warning information

- A) **The Mobile Application for Dissemination:** The mobile application and dissemination (also called [HUSIKA](#)) was developed by ICPAC. HUSIKA, is a common platform where all users can share information and receive feedback. The application allows users from different levels to respond to a given alert, feedback, or report accordingly. IDMP HOA through the Strengthening Drought Resilience of Smallholder farmers and pastoralist in the IGAD region (DRESS-EA) project [here](#), funded by [Adaptation Fund](#) has enabled system enhancement that include *i. Feedback and survey module*- The changes focused on user experience and performance. Surveys now load faster and the interaction on web view provides enhanced interaction, resize ability and navigation *ii. Multi-language integration within the platform*- This now provides dynamic language library that is scalable and goes beyond the planned 4 languages i.e., Arabic, Buganda, Somali, and French. Therefore, an upgrade was made possible and *iii. Platform integration* with the ICPAC East Africa Drought Watch. This will improve user engagement via the HUSIKA mobile and web application.
- B) **New Forecast Module:** An addition, weekly forecast module fashioned to the one available on <https://www.icpac.net/weekly-forecast/> was developed and integrated with HUSIKA. This module has been developed courtesy of the country consultation. The module will make it easy for ICPAC and partners to share weekly, monthly and seasonal forecasts to target users.

Activity 3: Social inclusion in Drought Management

This activity was supported by National Oceanic and Atmospheric Administration (NOAA). Specifically, the activity was aimed at understanding the role of women and other vulnerable groups in drought management in the IGAD region. To focus the intervention, stakeholders from two countries (Sudan and Kenya) were engaged. Interactive sessions were held with key stakeholders in drought management institutions (Ministries, Departments, and Agencies-MDA). The stakeholders were from the Ministry of Environment and Forestry, Climate Change Department, National Drought Management Authorities, Civil Society organizations and the private sector. Poor coordination amongst the stakeholders/institutions in addressing gender inequality in drought management was identified as a key weakness. Recommendation noted include:

- Developing and or reviewing regulatory frameworks to ensure integration of gender into drought related policies and legislation; among key processes is to develop inclusive implementation mechanism and guidelines that describe the roles and responsibilities of various stakeholders.
- Institutionalization of social inclusion to avoid fragmentation amongst institutions to deliver on the role of gender and other social groups, identify leadership with clear mandate at all levels, monitor and ensure proactive drought actions.
- Innovate drought training programs to build capacity of policy maker, planners and implementers on gender transformative approaches that will enhance decision making power to meaningfully participate in drought management actions.
- Advocate for increased financial/budget allocation to gender and other social groups in drought management, including strengthening capacity to access funds from existing sources.

IDMP Horn of Africa planned activities in the 2022/2023 annual cycle include

Activity 1: Document business cases in drought management (follow up from the 2021/2022 work plan)

Activity 2: Strengthening partnerships and coordination mechanisms for inclusive drought actions

Activity 3: Increasing drought resilience for peace building and conflict prevention

2.11.3 IDMP West Africa (IDMP WAF)

1. Main activities, products, results and impacts

IDMP WAF OBJECTIVE 1: CATALYZE CHANGE

Work Package 1: Drought negative effects are managed in West Africa through the regional initiatives and cooperation/Act.2: Reinforce regional collaboration among pertinent Institutions on drought management/Put in place a regional West African platform on Drought management

Support for drought risk management in the Volta Basin: WMO, GWP-WA and VBA in collaboration with the CIMA Foundation have agreed on a collaborative framework for better drought risk management in the Volta Basin through the project titled “ [Integrating Flood and Drought Management and Early Warning for Climate Change Adaptation in the Volta Basin \(VFDM\)](#) ” funded by the Adaptation Fund. Within this framework, a VoltAlarm early warning system at the scale of the Volta Basin is being developed to provide drought forecasts in the Volta Basin. Volta Basin Drought risk maps have been developed as well as the Volta Basin Drought risk profile with specific recommendations for better drought risk management in the Volta Basin (see also section 2.11.5).

Work Package 2: Improved drought management through national and regional plans/ strategies

Development of a Water Management Master Plan for the Mekrou sub-basin in Niger integrating drought management responses / As part of the implementation of the "Water for growth and poverty reduction in the Mekrou sub-basin" project in Niger" (Mekrou Phase 2 - Niger Project) funded by the European Union, GWP-WA in collaboration with the CWP-Niger and the Ministry of Hydraulics and Sanitation has

developed the Water Management Master Plan for the Mekrou sub-basin in Niger that takes into consideration drought management responses in the sub-basin.

Capacity building, data collection and production of drought risk maps in the Volta Basin /As part of the implementation of the VFDM project, GWP-WA, in collaboration with WMO, VBA and CIMA Foundation, contributed to the process of capacity building, data collection and production of flood drought risk maps in the Volta basin. At the end of 2021, GWP-WA facilitated the organization of two series of six national capacity building workshops targeting technicians on the elaboration of flood and drought risk maps in the six VBA countries. These national capacity building workshops are structured around eight modules which are: (i) Module 1: Introduction to Disaster Risk Assessment; (ii) Module 2: Introduction to QGIS software; (iii) Module 3: Data Collection; (iv) Module 4: Hazard and exposure to flooding; (v) Module 5: Hazard and impact of drought; (vi) Module 6: Mapping of flood exposure and impacts of drought; (vii) Module 7: Vulnerability and impact of floods; and (viii) Module 8: Exposure to Droughts. Altogether, these contributed to enhance the capacity and the knowledge of nearly 65 technicians that are able going forward to develop droughts risks' maps for the national portions of the Volta basin.

Development of Local Drought Management Plans in the Volta Basin/As part of the implementation of the VFDM Project, GWP-WA supports VBA and WMO in the implementation of demonstration community-based drought management initiatives in the Volta Basin. Within this framework, local flood and drought management plans are being developed with the support of local authorities and communities.

Raising awareness in regional and national stakeholders about the Volta risk profile for floods and droughts / As part of the implementation of the VFDM project, CIMA Research Foundation, in collaboration with the Institute for Environmental Studies (IVM) of Vrije University, developed Volta basin drought risk maps for current and future climate scenarios, with a probabilistic approach. In this regard, GWP-WA, in collaboration with VBA, WMO, CIMA Research Foundation and VBA Focal Points, organized in each country of the Volta Basin from April to May 2022, national workshops to present to the stakeholders the Volta Basin flood and drought risk profile and gather feedback and recommendations for policy makers as well as key messages for developing a plan for the prevention and management of drought risks in the basin. Each national workshop brought together stakeholders involved with different roles in Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) namely Ministries of Planning, Finance, Interior, Agency for Disaster Management/Civil Protection, Meteorological and Hydrological Services, Water Resources Agencies and other key Ministries like Ministry of Agriculture, Environment, Natural Resources, Education, Health. At the end of the workshops, the participants endorsed recommendations for the integration of drought risks in national policy development processes and for actions aimed at the prevention of flood and drought risks in the Volta Basin.

Capacity building of national and regional structures on the “Drought Monitoring and Early Warning for Integrated Drought Risk Management in West Africa” / GWP-WA facilitated the mobilization of trainees from national and regional structures to supplement their representatives to the third series of training on the “Drought Monitoring and Early Warning for Integrated Drought Risk Management in West Africa”. This distance learning course was developed through a collaboration between the Integrated Drought Management Program (IDMP), UNEP-DHI Centre, UNDP CapNet, and VFDM project consortium partners. The course is designed for government officials and selected professionals, women and men, from Volta Basin countries with various backgrounds and professional experiences in the field of disaster risk

reduction, possibly with a focus on drought management. It aims to provide an understanding of the basic concepts and terminologies of the drought phenomenon and its integrated management approach.

Support for the organization of national capacity building workshops for Volta Basin actors on "nature-based-solutions" in response to drought with a view to developing bankable projects at the scale of the Volta Basin /As part of the implementation of the VFDM project, GWP-WA supported VBA in close collaboration with WMO and other partners to organize national capacity building workshops for actors in the Volta Basin on "nature-based solutions" and climate change adaptation with a view to the development of bankable projects at the scale of the Volta basin at local, national and regional levels.

Work Package 5: New innovative solutions found for Drought Management in the focus sub-area (water resources, agriculture, and desertification)

In collaboration with the International Secretariat for Water, CWP-Benin, CWP-Burkina and the NGO YVE-Togo, GWP-WA is implementing the TonFuturTonClimat project funded by the Government of Quebec through the International Climate Cooperation Program (PCCI) and the GWP. The TFTC2 project aims to build the capacity of associations and equip young people (18-35 years old) from Togo, Benin and Burkina Faso to become promoters of innovative ideas to sustainably respond to issues related to climate change and support local economic development. In Burkina Faso, the TFTC2 project supports the promotion of good practices in sustainable land management, adaptation to climate change and conservation of biological diversity in the rural commune of Komki Ipala. In Togo, the project raises awareness and supports young people for a transition to sustainable agriculture through agroecological practices in the municipalities of Grand Kloto. In Benin, the project supports young people in the production and use of compost from organic waste and initiatives for the sustainable management of water resources in the Tchoutchoubou micro-basin in the Pendjari basin. Initiatives are underway.

In the Mekrou sub-basin in Niger, GWP-WA in collaboration with the CWP-Niger and the Ministry of Hydraulics and Sanitation is implementing pilot initiatives for the protection and enhancement of the natural resources of the sub-basin, which are part of the implementation of its Water Management Plan. These initiatives focus on the development as well as the multiple use of water resources, IWRM in the sub-basin. Initiatives are underway.

IDMP WAF OBJECTIVE 2: GENERATE AND SHARING KNOWLEDGE

Work Package 7: The results of IDMP WAF are well shared in the region and the selected countries / Awareness on drought are improved

The results of the implementation of the activities of the TFTC2 Project, the Mékrou Phase 2 Niger Project and the VFDM project were shared during the World Water Forum held in Dakar from March 21 to 26, 2022. Capitalization reports were produced and then shared with the various stakeholders.

As part of the celebration of the 25th anniversary of Global Water Partnership, GWP-WA has developed a capitalization document which compiles eleven (11) case studies from West Africa region on topics related to water resources management, integrity in the water sector, transboundary water resources cooperation and climate change adaptation. These case studies are based on the results of initiatives undertaken in various countries, in particular Benin, Burkina Faso, Ghana, Mali, Niger, Senegal and Togo, as well as at the regional level in the Volta and Mekrou basins in West Africa. This capitalization action aims to highlight the efforts by GWP in West Africa with different partners to contribute to the

improvement of the living conditions of the populations of the concerned areas. Two of the eleven case studies are from the results of GWP's integrated drought management initiatives in West Africa.

The launch of the capitalization document was done during the World Water Forum, which provided an opportunity to share the contents of the document with the public. The link to access the capitalization document is : [Etude Anglais16-3-2022def_Mise en page 1 \(gwp.org\)](#)

IDMP WAF OBJECTIVE 3: STRENGTHEN PARTNERSHIPS

Work Package 8: Regional / countries level partnerships' competencies enhanced/Act. 2: Key stakeholders' engagement and strengthening the network

Youth involvement in water security and climate change:

GWP-WA supported young people from Benin and Burkina Faso in carrying out the national consultation on the place of young people in the implementation of SDG6 and the Paris Agreement. This consultation is part of the implementation of TFTC 2, whose recommendations focus on capacity building and employability of young people in trades related to water security and climate resilience. As part of this project, three young people have been identified to take part in the 9th World Water Forum in order to present the results and recommendations of these consultations.

Participation in meetings

Participation in virtual meetings of the Integrated Drought Management Program (IDMP): The VFDM Project Manager regularly reports on the activities of the IDMP carried out in West Africa.

Act. 2: Fundraising

In 2022, GWP-WA submitted two concept notes to the Global Fund for Ecosystem-Based Adaptation in the Mekrou basin in Benin and then in the Mono basin. The proposed actions stem from the achievements of the Integrated Drought Management project in West Africa. The results of the call for projects are not yet available.

VBA, in collaboration with IUCN UNEP and GWP-WA secured USD 7,122,566 from the Global Environment Facility for the implementation of the project titled: Reversing Ecosystem and Water Degradation in the Volta Basin (REWarD - Volta Basin). The objective of the project is to reverse ecosystem and water degradation and support integrated ecosystem-based development in the Volta Basin through strengthened transboundary governance and ecosystem restoration and conservation for sustainable livelihoods. The project focuses on the establishment of a drought EWS in the basin, sustainable land management, restoration of degraded ecosystems, sustainable management of water resources, etc. The starting of the project is scheduled for the second half of 2022.

In support to the Government of Togo and in collaboration with UNDP Togo and UNICEF Togo and GWP-WA, a prefeasibility report and a concept note for the project proposal entitled "Strengthening the Climate Resilience of Vulnerable Rural Communities in Togo's Northern Kara and Savanes Regions" has been submitted to the GCF Secretariat. The overall objective of the project is to increase the resilience of selected rural, poor and vulnerable communities located in Togo's two northernmost regions of Savanes and Kara exposed to the impacts of the projected increase in the frequency and intensity of droughts and extreme precipitation events as well as increasing temperatures. The project total budget is USD

35,500,000 including USD 17,750,000 as GCF funding requested. UNDP is the Implementing Agency and the Executing Agencies are UNICEF and GWP-WA.

2.11.4 IDMP Central Asia and Caucasus (CACENA)

As it was mentioned in the IDMP Workplan for 2021-2022 for Central Asia and Caucasus countries that are currently exposed to 5-year drought, two countries (Uzbekistan and Armenia) were supported in a format of seed funding from the budget provided by NOAA countries to make an initial step for drought policies using the experience and support of the regional IDMP CEE programme, which underwent a similar process during the past 20 years. While designing these country needs oriented programs, the preparatory work has been performed by relevant CWPs (mapping of stakeholders, development the overview for draught management and etc.).

So, IDMP activities implemented in 2021-2022 were performed both on country and at the regional level and they are specified as following:

1. COUNTRY level

1.1 ARMENIA (Caucasus):

Main goal: to explore opportunities of developing an integrated drought management plan for Armenia

Wide and specific objectives:

- to identify the existing legal, institutional and governance gaps in drought management sector in the country,
- to clarify the directions of drought monitoring, early warning, risk management and consequence elimination systems.

Format of activities:

- Study, research and analysis by project expert;
- Setting of working group (presented by representatives of various government agencies, members of intergovernmental committee, also an experienced independent experts) – series of stakeholder meetings
- Formal inter-agency workshop that took place in May 4-5, chaired by the Deputy Minister of Environment, Mrs. Gayane Gabrielyan

Documents developed and discussed:

- A summary report on “**Analysis of Drought Management System in Armenia, Identification of Weaknesses and Gaps**” was prepared within the project related to the gaps in the drought management system, such as problems in receipt, analysis, exchange of monitoring data, drought early warning system development, drought risk assessment, inclusion of drought in agricultural insurance system, capacity building and other issues.
- “**Content of the Drought Management Plan**”, which describes what chapters the Plan should consist of and what information each chapter should contain.

Next steps to be undertaken:

- It is planned to work on legal reforms to enable the drought management system in Armenia

- To work on the formal recognition of "Drought Management Plan"
- To organize a meeting with members of the drought intergovernmental committee established in 2021, as well as with the experts in the field of disaster risk reduction and management to ensure the synergy and to discuss the ways on getting progress

1.2 UZBEKISTAN (Central Asia):

Main goal: Development of recommendations on setting the priorities for National Drought Management plan for 2023-2030 to ensure the synergy to combat drought and land degradation in Uzbekistan

Wide and specific objectives:

- Analysis of current status, gaps and challenges for the three pillars of the IDMP + drought policy (in Uzbekistan)
 1. Review of existing resources and capacities (to check what country programs and institutions already exist related to drought management in Uzbekistan);
 2. Stakeholder mapping (to identify who to involve and/or distribute the survey to, invite to the IDM planning workshop)
- Development of draft concept for a revision of the National Action Program to combat drought and land degradation in Uzbekistan; GWP CEE was invited to provide guidance on the proper use of the "National Drought Management Policy Guidelines A Template for Action" by Uzbekistan

Format of activities:

- Study, research and analysis by project expert;
- Setting up working group of experts
- Series of in-person and online stakeholder meetings
- Formal inter-agency workshop that took place in April 5, attended by representatives of all ministries, departments, research institutes, non-governmental organizations involved in the problem of droughts.

Documents developed and discussed:

- **An overview report on the current state of drought management in Uzbekistan** has been prepared and published (https://aral.uz/wp/2022/03/31/n_drought/). This report comprises five sections:
 - General information and definition of drought;
 - National legislation on drought control;
 - Responsibility for drought - national institutions involved;
 - Drought assessment process;
 - Looking ahead - developing drought risk management programs.
- **Concept for revision the National Action Program to combat drought and land degradation in Uzbekistan**
 - The first priority area is capacity development for monitoring, risk assessment and drought prevention: strengthening the technical base of the Hydrometeorological Service and introducing innovative solutions for drought monitoring and forecasting; development of a drought monitoring and early warning system that will improve the decision-making process for planning and managing risks regarding the impact of drought on food and water security.

- The second priority is drought mitigation. This includes the development of measures to address water scarcity issues based on monitoring and early warning data: the degree of expected low water and drought (a set of indicators) is a criterion for the adoption of certain action plans to mitigate the effects of the expected drought.
- The third priority area is capacity building and awareness raising: it is important to raise the awareness of the rural population (including women) about climate change adaptation and effective agricultural practices.
- The fourth priority area is to actively develop regional cooperation: given the transboundary nature of the effects of drought, cooperation between the countries of the region is extremely important. In this regard, participants turned to the Global Water Partnership to provide all possible assistance in activating regional and international cooperation on drought risk reduction.

Next steps to be undertaken:

Continue the overall support of governmental agencies in implementation of national water management strategy; Participation in IDMP events organized by National and International agencies to ensure the synergy and efficiency.

1.3 TURKMENISTAN (Central Asia)

Human and technical resource capacity of the Turkmen Hydromet Service has been assessed by GWP CACENA under the technical guidance of WMO and financial support of the Central Asia Water and Energy Program (CAWEP) of Worldbank and WMO. TurkmenHydromet is under the Ministry of Agriculture and Environmental Protection, which are key actors for drought related activities and therefore key partners for IDMP on the country.

The Assessment was performed in a format of interview with key specialists of the Turkmen Hydromet and covers the following sections:

- Institutional Status
- Stakeholders
- Service Delivery Chain (Observation, Forecasting, Data processing, Service delivery, Human Resources)
- Organizational needs for defining strategic goals for the service delivery chain
- Performance indicators
- Costs of the strategic goals
- Monitoring and evaluation criteria
- Turkmenhydromet strategic plan and financial plan

The assessment report “Turkmen Hydromet Review Report – 2022” has been submitted to WMO and is used for the development of a project proposals on technical assistance to TurkmenHydromet.

2. At the REGIONAL level following activities have been performed by GWP CACENA:

- Drought and water scarcity portfolio of GWP CACENA was developed including formal documentation, methodological and discussion papers, strategies and etc. on drought management issued by national and international institutions.

- Participation in drought management related events to ensure the delivering of GWP CACENA's input (including the expert's comments for Regional Drought Strategy by CAREC)
- GWP CACENA's partners and donor institutions were communicated on the interest on project proposals on drought related issues to be submitted on behalf of CWP's and RWP
- Participation in Project Development Group Meetings aimed to develop the joint application to Adaptation Fund.
- Materials (both English and Russian) on drought related activities were developed for GWP sites

The majority of these activities were performed with the assistance of Dr. Galina Stulina who was contracted as IDMP Consultant to provide substantive back stopping and support to the various streams of work on drought issues and to ensure duly involvement of GWP CACENA in terms of synergy and efficiency.

2.11.5 Adaptation Fund: Volta Flood and Drought Management Project

During the reporting period, the implementation of the [Volta Basin Flood and Drought Management \(VFDM\)](#) project activities are on-going with the APFM Support Base Partners namely CIMA Research Foundation, IUCN, Knowledge and Innovation (K&I).

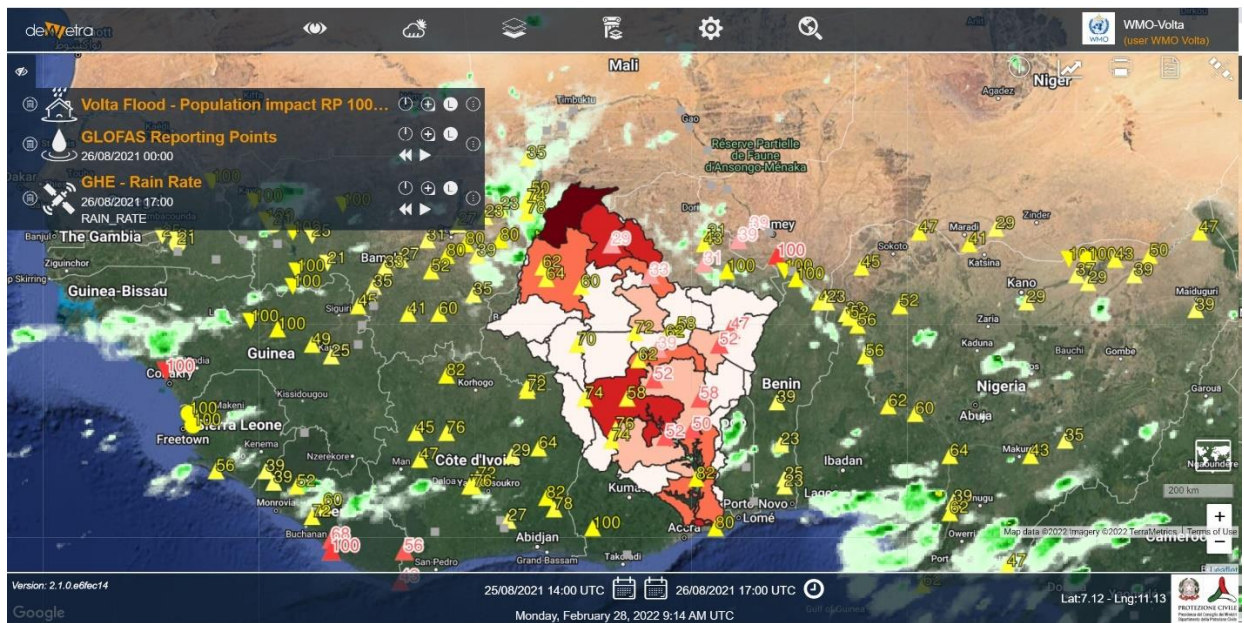


Figure 1: VOLTALARM EWS developed under the VFDM project

The below table provides a list of major planned and completed activities of the VFDM project

Activities completed until July 2022	Activities planned from August 2022
National consultation reports for the Six countries and Volta Basin Authority for developing EWS on floods and drought	Develop long-term flood and drought risks prevention and management strategies for the Volta Basin
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	Develop a hydrological modelling and impact-based forecasting system for floods and drought hazards for the Volta Basin which will be embedded into the VOLTALARM early warning system

Development of floods and drought risk maps and climate scenarios for the Volta Basin region with the support of 61 national technicians and CIMA Research Foundation	Develop the National Centralized Database and integrate the existing Hydrological and meteorological observation networks into the VOLTALARM EWS
The design and development of the VOLTALARM multi-hazard 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	Build synergies and complementarities with other on-going or completed projects and visualize any available products or tools on flood and drought monitoring and forecasting system
the provision of training to over 200 participants from project countries through distance learning courses on Basic and Advanced Hydrology, Geospatial information, and drought monitoring in the Volta Basin region	Develop a bankable project proposal on Nature-based solution for flood and drought management and submit it to donors or financial institutions for funding
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 VOLTALARM EWS will be pilot tested in 10 prone areas of the Volta Basin during the monsoon and dry seasons in order to identify the applicability and effectiveness of the early warning-early action at the community level
The implementation of community-based flood and drought management activities in the six communities of the Volta Basin.	Support beneficiary countries in strengthening policy, action plans and institutional capacity for integrated flood and drought management at the local, national and transboundary levels
Review of the existing policies, plans and guidelines on flood and drought management at the regional, national and local levels of the Volta Basin	Carry out training or capacity development activities for the national, regional and local agencies professionals on various phases of E2E-EWS-FF

Between March-June 2022, an independent mid-term evaluation of the VFDM project was carried out following the guidelines of the Adaptation Fund (the implementing entity must undertake the MTE for projects/programmes that have been under implementation for over four (4) years). Mid-Term Evaluation (MTE) was mainly carried out to assess progress towards the achievement of the project objectives and outcomes as specified in the Project Document including early signs of project success or failure in order to identify adjustments to achieve its intended outcomes or results. The mid-term evaluation report was developed and validated

by the regional and national stakeholders, following which it was submitted for review and approval. The VFDM MTE report is available [here](#).

The third-year project progress report (PPR-III) will be submitted to the Adaptation Fund during September 2022 including the request for one year no-cost extension of the project implementation in order to manage the delays encountered due to the Covid-19 pandemic during March 2020-January 2022. Following review and approval from the Adaptation Fund Secretariat, 4th tranche of payment will be transferred for the implementation of 4th year project activities.

2.11.6 IDM pre-concept for the DRIN basin (AF)

In order to meet the need for improved proactive drought management in the Drin basin and building on the achievements and lessons learned from the DriDanube project, the IDMP TSU together with IDMP CEE and GWP MED have started the work on a project proposal on IDM in the Drin river basin. With WMO as implementing entity, it will include the NMHS of the three basin countries Albania, Montenegro, and North-Macedonia as executing entities. First discussions with the Hydromet Services have been held and the initiative is now jointly coordinated.

2.11.7 IDM project in Central Asia (AF)

WMO, GWP, FAO, UNCCD and CAREC (Central Asian Regional Economic Cooperation Program) are developing a project proposal for strengthening drought resilience in the Central Asian region through proactive drought risk management. The proposal will be submitted by WMO as implementing agency to the Adaptation Fund. A preconcept has been developed and shared with the five Central Asian countries for first consultations (Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, Turkmenistan).

2.11.8 IDM project for the Mekong River basin

In early August 2022, WMO has submitted an update pre-concept note to the Adaptation Fund for consideration for a project on strengthening capacities for climate services in the Mekong River basin. The overall objective of the project is to reduce vulnerability and increase resilience of the Mekong River communities in Cambodia, Lao PDR, Myanmar, Thailand and Viet Nam to climate variability and change by implementing climate-smart decision-making networks for better disaster risk management of drought and floods, agriculture management, and water resources management encompassing hydropower generation.

2.11.9 Activities in South Asia Drought Monitoring System (SADMS)

IWMI continues to support the South Asia Drought Monitoring System (SADMS: <http://dms.iwmi.org>). The status of SADMS will be provided by IWMI during the IDMP Advisory Committee meeting.

2.11.10 Activities in Central America

Drought management activities have been developed by GWP Central America with support from the IDMP and with close involvement of the regional WMO office in Costa Rica since 2013 (further information [here](#)). The TSU currently explores opportunities to establish a flood and drought center for Central America since this was raised several times by several countries. WMO is currently working with Panama and Costa Rica to establish roadmaps to further develop hydrometeorological services for the countries and in this context, integrated flood and drought work could be piloted and further extended to the whole region.

2.11.11 Activities in South America

The Drought Information System (SISSA) for Southern South America was [formally launched in June 2021](#) (video). In addition, SISSA partners held a brainstorming meeting in April 2021 on plans to conduct an in-person workshop which has been postponed due to the COVID-19 situation. This project is funded from the Inter-American Development Bank and is the result of the [Workshop on Developing a Drought Monitoring, Early Warning and Mitigation System for South America](#) held in August 2017. The status of SISSA will be given during the IDMP Advisory Committee meeting.

EUROCLIMA+ is also funding two other drought-related projects in South America: (1) [a project with CIIFEN to strengthen the regional and national drought and floods information and management systems in the Andean countries \(Western South America\)](#) for 1.5 million Euro for 3 years, and (2) a proposal submitted jointly by SENAMHI Bolivia and SENAMHI Peru to work on droughts in the Altiplano. All three projects will complement one another, and they all will work together towards the common goal of supporting, developing, and implementing SISSA for the entire South American region.

2.12 International Drought Mitigation Research Centre

The COVID-19 situation has slowed development of the possible International Drought Mitigation Research Centre (IDMRC) and there will be discussions at the AC/MC meeting on whether to continue this activity.

2.13 Integrated Drought Management HelpDesk

In September 2017, Integrated Drought Management HelpDesk was launched. The HelpDesk consists of a “Find” section (to find resources in the library and access tools and guidelines), a “Connect” section (to link to IDMP initiatives) and an “Ask” section (to request advice and technical support). The “Ask” section was the final section that completed the HelpDesk. A draft profile of all partners for the catalogue of services of the HelpDesk was developed by the IDMP TSU and each Support Base Partner’s profile has been uploaded to the IDMP website. Fourteen IDMP Support Base Partners (see section 2.1) have reviewed the profile and concluded the discussion on the modalities of engagement with the HelpDesk to date. Follow-up has been sent to others. In addition to the “Ask” function of the IDMP HelpDesk, stakeholders can also submit questions via the comment function in the [online Drought Indicator tool](#).

In total 30 requests have been received through the HelpDesk from 1 July 2021 to 30 June 2022 with a sum of 253 requests since the inception of the HelpDesk in 2017. This is a decrease to previous years, where around 50 requests were received per year, mainly through the Indicator online tool.

Close to all requests have been completed by the IDMP Technical Support Unit with IDMP partner engagement and the IDMP regional offices and some are ongoing. For 2021/22, out of these 30 requests, 16 requests were questions related to indicators and indices referring to the IDMP publication, *Handbook of Drought Indicators and Indices* (Figure 1a). As shown in Figure 1b, most requests were related to rapid guidance on drought indices, while smaller proportions were requests for technical assistance (workshops, strategy, drought policy) and capacity building. Most requests did not contain information on the stakeholder’s affiliation (research, public/private sector). For 85 % of the requests, the country or region was not specified. Stakeholders that did indicate their region were mainly from Europe, Africa and Asia (2 requests each).

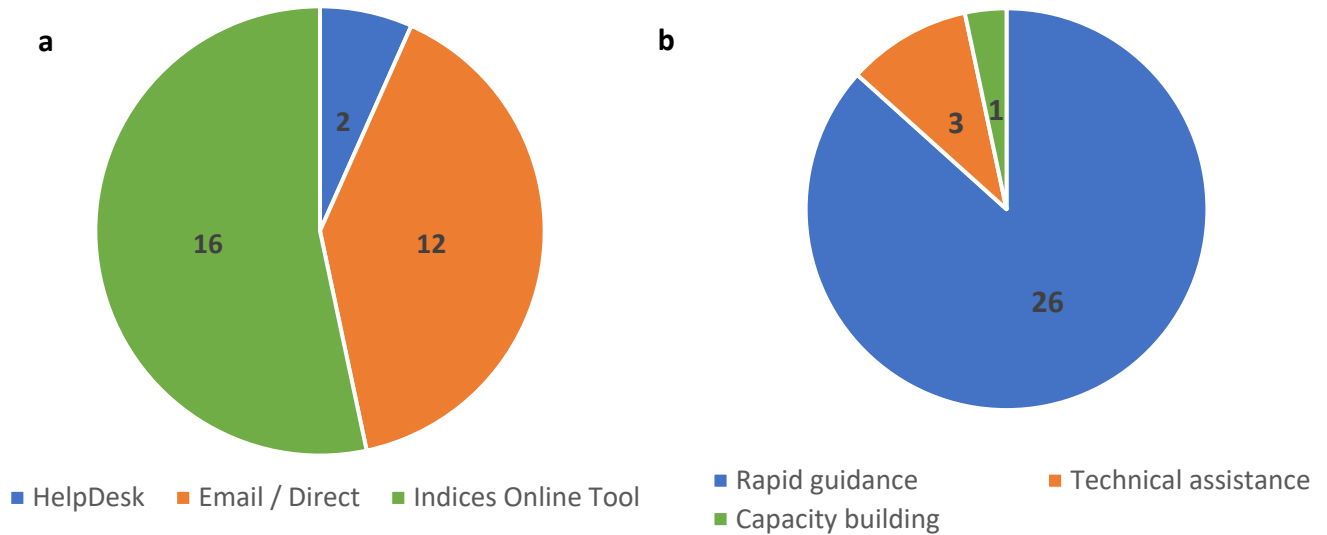


Figure 1 a) Source of IDMP assistance requests (HelpDesk, Email/Direct, Indices online tool), b) Type of requests posed. In total 53 requests were submitted for the 2021/22 reporting period.

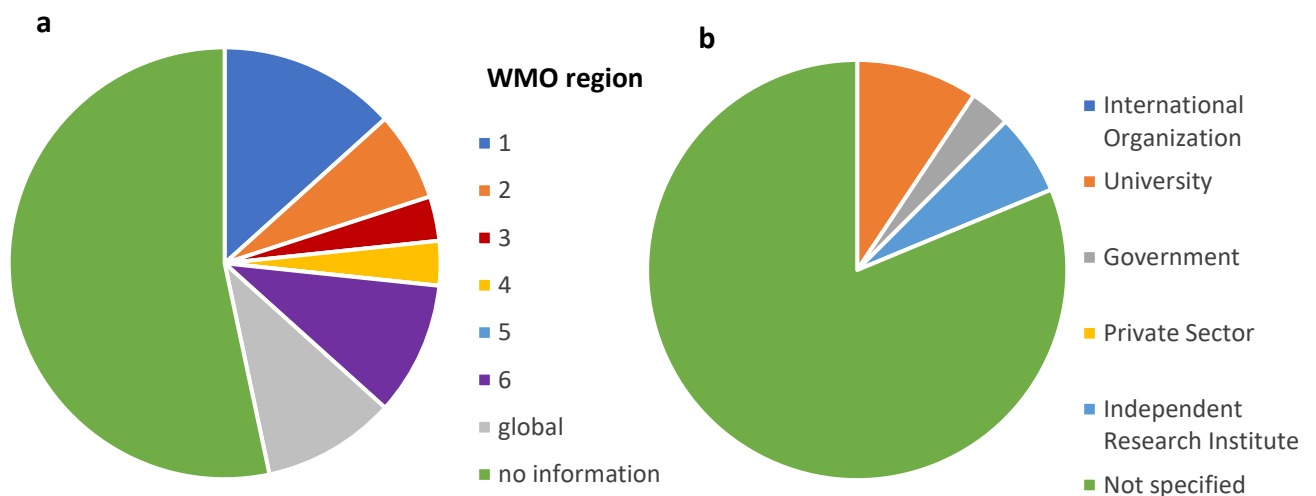


Figure 2 a) Regional origin of HelpDesk request, b) Institutional origin of HelpDesk requests.

2.14 IDMP Website

The [IDMP website](#) is the main knowledge hub and archive of the IDMP and is being maintained by the IDMP TSU with WMO and GWP support. Pages are updated to include the latest development on regional activities, publications, and documents. The website content is since 2020 available in English, French, Russian and Spanish. In addition, the TSU has been working with an external consultant to update the website template and looks. The updated design of the website is online since September 2021.

The section “[Advisory and Management Committee Meetings](#)”, provides an overview of the meetings of the management group and their main recommendations since its establishment in 2013, with the last

addition of last year's 2020 IDMP annual meetings. A "[Partners](#)" page presents the programme's partner organizations, with links to their websites.

The pages of the IDMP regional initiatives are continuously being expanded. The website also contains a map that provides an overview of the various activities of the IDMP and a space to explain the status of each of the activities.

To date the library of drought-related publications contains 325 drought-related publications. Publications can be easily added to the library by the IDMP Technical Support Unit and IDMP partners are invited to suggest additional and new publications that should be included.

2.15 Development and Implementation of the Communication Strategy

In order to disseminate information about IDMP's activities and outcomes, different methods of communication have been used. The IDMP website and social media channels are the primary methods of engaging with audiences and generating sustainable growth. The IDMP website has been transferred to a new layout in summer 2021 and the TSU is working on making the website more user-friendly. Feedback from partners on this is welcome.

A new feature of the IDMP outreach materials are fact sheets, all fact sheets are available [here](#). The IDMP TSU has started discussions with the APFM TSU in order to use synergies for increasing the programmes' visibility.

IDMP website

Comparative website statistics for the year 2021-22 are not available due to a change in analytics software. Average number of daily visits was 1511 for the reporting period with an average of 2.7 pages per visit.

IDMP social media

The IDMP is continuing its strategy of publicizing activities and projects in the joint APFM-IDMP Facebook, Twitter and LinkedIn accounts. This has created a tool to drive traffic to both websites. In 2022, the Water Youth Network has become a partner of the IDMP and identified three volunteers to support the IDMP in different activities, one of them being social media management. With this increased capacity, the TSU is planning to post regular updates on events and IDM work as well as promote partners' work through the IDMP channels.

Information material

A new series of graphical factsheets was launched on World Drought Day 17 June 2021. These factsheets summarize on 1 page in a graphical, attractive way different aspects of IDM and are available on the IDMP webpage [here](#).

In addition, the IDMP has a brochure and roll-up posters for events.

International Events

Members of the TSU took part to various international conferences, where they gave presentations introducing the IDMP. These are further detailed below in section 2.16. Please refer to subsections of section 2.11, for events attended by the IDMP CEE, IDMP HOA IDMP WAF, and IDMP CACENA.

2.16 Engagement with International Processes and Events

The IDMP TSU has been engaged with the following international activities (in addition to the UNCCD and FAO activities described in section 2.3 above);

- Katrin Ehlert (IDMP TSU) joined the JRC EDORA kick-off workshop on 16-17 June 2022 (more info [here](#))
- Valentin Aich (IDMP TSU) introduced IDM at a joined WorldBank and ICHARM workshop in Pakistan
- The IDMP TSU was engaged in a workshop of the [XAIDA](#) H2020 research project. In this project, 16 research institutes are collaborating to examine the links between recent extreme weather events and climate change, with a goal to foster the use of machine learning methods.
- IDMP continues to engage in the High-Level Expert Panel on Water and Disaster (HELP) and has contributed in a [flagship report on drought](#) as well as the annual report of the flagship initiative on climate.

In 2021 many events have been cancelled or postponed due to the Covid-19 pandemic.

2.17 Fundraising

Work continues to identify fundraising opportunities for the IDMP. Since 2021, the IDMP is receiving annual funding from NOAA through the GWP administrative processes. In this context, the IDMP TSU develops a yearly work plan and budget to use the funds for further development of core IDMP activities in coordination with the IDMP recommendations.

Several project proposals are under development to strengthen IDM implementation on the regional and national level (see section 2.11)

2.18 Financial Support

The expenditure report of the IDMP for the year 2021 will be provided to the Management Committee of the IDMP at the meeting.

3. Workplan for the period 2022-23 and IDMP strategy

3.1 Global Activities

The IDMP will continue to work towards a coherent approach to Integrated Drought Management and a strong joint push towards a proactive, risk-informed management of droughts.

In the 2021/22 reporting period, the IDMP TSU has worked intensely on drafting the IDMP 2022-25 strategy, which will define the mid-term direction of the programme. The document has received input from many partners and builds on the following aspects:

- Support the implementation of Integrated Drought Management and catalyze change
- Generate and manage knowledge
- Strengthen partnerships
- Programme management and implementation

The strategy is in a final draft stage and will be shortly presented to IDMP partners during the 2022 annual meetings.

3.2 Regional Activities 2022-23

3.2.1 IDMP Central and Eastern Europe

Please refer to section 2.11.1 for more information.

3.2.2 IDMP Horn of Africa

Please refer to section 2.11.2 for more information.

3.2.3 IDMP West Africa

Please refer to section 2.11.3 for more information.

3.2.4 IDMP Central Asia and Caucasus

Please refer to section 2.11.4 for more information.

3.3 Publications planned for 2022/23

Please refer to sections 2.7.4-2.7.8 for publications that are currently being developed. We are expecting all mentioned draft documents to be published in the 2022/23 reporting period.

Annex 1 IDMP Operational Guidelines ([available here](#))