Activity Area -2 Drought management systems

outcome	Drought management systems comprising drought Monitoring and Early Warning & drought vulnerability and impact assessment & drought mitigation, preparedness and response implemented by Members
	Food security is enhanced by informed end users' decisions at all levels from regional to local.
	Concept of Integrated water resources management including water use and allocations for supporting food production is widely accepted and followed
measure of success	Number of Members providing their drought monitoring and assessment products and services that includes water resources (hydrological) component available through WMO infrastructure (RCOFs, GMAS, HydroSOS)

output	activity	ID	description	LTA	SOP	success criteria	time frame	responsibility	resources	partners	linkages	MOA	comments
Enhanced coordination, effectiveness and governance of all WMO activities in supporting Members in Integrated Drought Management	Streamline ongoing activities on Droughts across the WMO Constituent and Subsidiary bodies, ensuring coherence, consistency, and efficient use of resources.	C.1 .1		2, 3		Map of activities with potential overlaps identified	2022	SERCOM, INFCOM		GWP, FAO, UNESCO	IDMP,		
	Ensure IDMP continues providing a technical resource for drought management through a Community of Practice and a HelpDesk providing:	C.1 .2		2, 3		Expressed Members' satisfaction ; number of helpdesks satisfied	Continu ous, review on biannual basis	SERCOM (SC-HYD, SC- AGR, etc.)		GWP			
	i) Expert Advice and exchange of experiences (Joint Technical Support Unit of GWP and WMO), ii) Guidelines and Tools,												
	iii) Project Preparation support,iv) Capacity Development												
	Establish effective joint planning and implementation mechanisms with major partners and activities (IDI, UNDRR, FAO, IFAD, European Commission)	C.1 .3	Better coordination f UN flood related activities brings more effective delivery on flood risk assessment and forecasting around the globe.	2,3						IDI, UNDRR, FAO, IFAD, European Commissio n	RAs		

output	activity	ID	description	LTA	SOP	success criteria	time frame	responsibility	resources	partners	linkages	MOA	comments
	Establish guiding principles and agreements with private sector to support drought related early warning and risk management	C.1 .4	Private sector could offer technologies like AI or cellphone applications that enable enhancement of services in flood forecasting. Searching opportunities for cooperation via agreements and pilot projects.	2,3						/ Private sector, NMHSs	RAs		
assumptions	Integrated drought manage	ement	l is a priority at national le	evel for	Member	rs		<u> </u>					
risks	Change in overall political a COVID 19 pandemic is alto Lack of alignment with othe Lack of financial resources	ering V er activ	VMO modalities of work, vities in the field of Wate	with a r (e.g. l	potentia.	l impact on effi	ciency due	to teleworking and	d impossibility	of face-to-face	meetings.		
Drought related data and products with global and regional coverage are available for the use at national scale by Members	i) Identification of requirements on Globally/regionally produced information for use in drought assessment, modelling and prediction at national scale by NHSs, and ii) development of an interface for NHSs to search, use and interpret the products.	C.2 .1	The identification of requirements includes, at least, those on what elements, their temporal and spatial resolution, latency, formats, and transfer/access mechanisms.	2, 3									
	Establishment of Global centers on drought within GDPFS and capacitation of NMHSs to process and apply the information to local context	C.2 .2	Global centers must have the capacity to regularly produce / make available the required data and products NMHSs need capacity and tools/methodology to apply global/regional info effectively	2, 3							Activity 1 (outcome 7 on GDPFS)		
	Operational guidance and tools for verification of products available	C.2 .3	Guidelines / training materials / tools for interpretation for using products of GDPFS drought centers are available together with a tool and guidance how to verify derived	2									

output	activity	ID	description	LTA	SOP	success criteria	time frame	responsibility	resources	partners	linkages	MOA	comments	
			products at National/local scale.											
assumptions	Integrated drought manage	ement	is a priority at national le	evel for	Member	S	l			I .				
risks	Change in overall political a COVID 19 pandemic is alte In case of GDPFS, lack of undermines the idea of GD	ering V candid	VMO modalities of work, dates to become centers	with a post	potential ing unde	l impact on effi er GDPFS rules	ciency due s and devel	to teleworking and opment of centers	d impossibility	of face-to-face	-	ng in priva	te sector) that	
Gaps in Members' capabilities in drought assessment, monitoring, modelling and prediction are known	Development of a Checklist to enable reviewing current capacities, by experts	C.3 .1	Inspired by MHEWS checklist and Sendai monitor evaluation of goal G											
	Development of a framework for evaluation of gaps and needs of National drought forecasting and early warning systems	C.3 .2	Provide guidance on how to make use of the framework in order to perform the evaluation. Establishment of a repository of assessed NMHSs.	2							Country profile database			
assumptions	Integrated drought manage	ntegrated drought management is a priority at national level for Members												
risks		Change in overall political and societal priorities e.g. due to COVID-19 pandemic results in decreased involvement in water–related agenda COVID 19 pandemic is altering WMO modalities of work, with a potential impact on efficiency due to teleworking and impossibility of face-to-face meetings.												
The need of an effective national drought policy is understood by Members	Support Members in the development of proactive drought impact mitigation, preventive and planning measures, and risk management	C.4 .1		2										
	Help improve the public awareness of drought risk and preparedness for drought	C.4 .2		2										
	Demonstrate the convenience of linking drought management plans to local/national development policies	C.4 .3		2										
assumptions	Integrated drought manage	ement	ı is a priority at national le	evel for	Nember	'S	<u> </u>		<u> </u>	<u> </u>	1	1		
Risks	Change in overall political a	and sc	ocietal priorities e.g. due	to COV	/ID-19 pa	andemic result	s decrease	the involvement of	of politicians in	water-related	l agenda			
Increased capacities and capabilities of Members through training of	Capacity building activities organized through the IDMP, including curricula and training material based	C.5	Training materials are to be included on: i) Drought Monitoring, Modelling and Early	2,3										

output	activity	ID	description	LTA	SOP	success criteria	time frame	responsibility	resources	partners	linkages	MOA	comments
personnel in drought (low-flow) Monitoring, Modelling and Early Warning & drought vulnerability and impact assessment & drought adaptation and mitigation, preparedness and response (including in the field of support of food production and security)	on needs identification, developed for capacities and capabilities in drought management of Members		Warning, ii) Drought vulnerability and impact assessment, and iii) Drought adaptation and mitigation, preparedness and response										
	trainings materials based on curricula developed to support Members	C.5 .2	Training materials (e-learning) are to be included on: i) Drought Monitoring, Modelling and Early Warning, ii) Drought vulnerability and impact assessment, and iii) Drought adaptation and mitigation, preparedness and response iv) support of food production industry	2,3									
	twinning projects in user driven products development	C.5 .3		2,3									
assumptions	Integrated drought manage	ement	is a priority at national le	evel for	Member	S						l .	
risks	COVID 19 pandemic may a	alter M	lembers' priorities with re	espect	to policie	es on Drought	s and Food S	Security for the fu	ture.				
	COVID 19 pandemic is alte	ering V	VMO modalities of work,	with a	potentia	l impact on eff	ficiency due	to teleworking and	d impossibility	of face-to-face	meetings.		
Increased cooperation (and co-production of services) of hydrological, meteorological and climatological communities and international	Widen the implementation of a Water segment towards the creation of Regional Outlook Fora (ROFs), based on the successful experience of RCOFs with water segment in Central America	C.7 .1		2, 3							RAS, SERCO M		
exchange (e.g., higher involvement of hydrology in climate outlook fora, basin commissions)	RA regular (annual/seasonal/monthl y) statements on water resources	C.7 .2		2, 3							RCOFs, RCC,		
assumptions	Integrated drought manage	ement	is a priority at national le	evel for	Member	S	-	ı	I	ı		1	1
risks	COVID 19 pandemic may a		•	·	•	-		•					
maaningful	COVID 19 pandemic is alte		VMO modalities of work,		potentia T	I impact on ef	ticiency due	to teleworking and	d impossibility	of face-to-face	meetings		nood to bo
meaningful drought indicators and indices are known and used	Develop a Global Drought Indicator (GDI),	C.8 .1		2, 3, 6									need to be reviewed pending SERCOM

output	activity	ID	description	LTA	SOP	success criteria	time frame	responsibility	resources	partners	linkages	MOA	comments
at all relevant scales	including a water scarcity indicator,					ontona	, manio						resolution on this issue
	- low-flow/low-level indicators;												
	- regional/national/basin indicators to be developed												
	Develop guidelines on harmonizing drought early warning and risk information for end user communication	C.8 .2											
assumptions	Integrated drought manage	ement	is a priority at national le	evel for	Membei	rs	•						
risks	COVID 19 pandemic is alte	ering V	/MO modalities of work,	, with a	potentia	l impact on effi	ciency due	to teleworking and	d impossibility	of face-to-face	meetings		
Increased production and/or availability of agrometeorological I and hydrological forecast from subseasonal to seasonal	Provide methodology and tools to interpret HYDROSOS data and information for agricultural applications (snow, ice soil moisture, groundwater, irrigation, water storage)	D.1 .1		2, 3, 6		Guidelines/ advice on interpretati on of hydrologica I data and outlooks for agriculture		SERCOM, INFCOM			Link to output 5 above		
	Incorporate specialized forecasting abilities for relevant sectors such as inland navigation (forecast of the depth of water in navigable rivers), energy, health	D.1 .2	Review of available and reliable methodologies to be used for specialized applications of seasonal forecasts as initial step to decide on further actions	2, 3,							SG energy, SG health, SG Cryo		
assumptions	Integrated drought manage	ement		evel for	Member	rs						ı	
risks	COVID 19 pandemic is alte	ering V	/MO modalities of work,	with a	potentia	l impact on effi	ciency due	to teleworking and	d impossibility	of face-to-face	meetings		
Effective dialogue between users and providers established	National consultations between forecasters and users in agricultural sector i) guidelines based on good practices developed and implemented ii) compilation of list of requirements from users and their decisions /expectations and how to research on these (guide) iii) catalog of case studies of product and service development as well as marketing	D.2 .1		2, 3, 6									

output	activity	ID	description	LTA	SOP	success criteria	time frame	responsibility	resources	partners	linkages	MOA	comments
	strategies for customers and development of process/check list, methodology to support strategic service planning of NMHSs including catalogue of products and services in response to customer requirements												
assumptions	Integrated drought manage	ement	is a priority at national	l level for	Membe	S							
risks	COVID 19 pandemic may alter Members' priorities with respect to policies on Droughts and Food Security for the future. COVID 19 pandemic is altering WMO modalities of work, with a potential impact on efficiency due to teleworking and impossibility of face-to-face meetings												
Strengthened capacity of NMHSs personnel in user driven products and services design and delivery (in the field of support of food production and security)	See C.5 "Increased capacities and capabilities of Members through training of personnel in drought (low-flow)"	D.3											
assumptions	Integrated drought manage	ement	is a priority at national	l level for	Membe	rs		<u> </u>					
risks	COVID 19 pandemic may a		·	•	•	_		-		of face-to-fac	e meetings		
Water-food- energy nexus and ecosystem services are better understood and inform water resources management	Facilitate discussion on the role of hydrology in providing the required data for optimizing the management of water resources to accommodate the three sectors' needs (through symposia, open panels, TED talks etc. on waterfood-energy nexus)	D.4 .1		3		TECO of SERCOM 2023		SERCOM (Sc- HYD, SC- AGR, SG- ENE, etc.)				CEPA L	
	Showcase case studies on the water food energy nexus (CEPAL, ENANDES, other)	D.4 .2		3		Studies promoted via community of practice by 2023		SERCOM (Sc- HYD, SC- AGR, SG- ENE, etc.)				CEPA L	
assumptions	Integrated drought manage	ement	is a priority at national	l level for	Membe		•	•	•	•	•		•
risks	COVID 19 pandemic is alte	ering V	VMO modalities of wor	rk, with a	potentia	l impact on effi	ciency due	to teleworking and	d impossibility	of face-to-fac	e meetings		