Draft List of Pipeline Countries and Regions

1. At its 12th Meeting, the Steering Committee invited the Implementing Partners to work with the Secretariat revise the list of pipeline countries for review by the Steering Committee, as a basis to prioritize future funding decisions. The proposed list of pipeline countries and regions is drawn from:
   - Mapping of the need, demand and leveraging potential of all 76 Least Developed Countries (LDCs) and Small Island Developing States (SIDS)[1]. Details of the three criteria for which information is compiled are found in Annex 1 to this document. The mapping includes LDCs and SIDS on the OECD list of DAC recipients;
   - Information provided by the three Implementing partners, drawn from their operational priorities and their regular interactions with country teams;
   - Other sources of information. Examples include, an analysis of the current climate services landscape, gaps and implications for future programming in Africa presented in March 2021, by UKmet with the support of WMO in the context of the WISER programme funded by FCDO. Another example is the current related portfolio of countries of the Green Climate Fund (GCF).

2. Further initiatives that will contribute to this exercise include the work carried out by the Alliance for Hydromet Development and its proposed Hydromet Gap Report. The Report will draw its data from a new Country Hydromet Diagnostics tool developed by WMO and aims to inform Alliance members' hydromet investment decisions. CREWS contributed to the testing of the Country Hydromet Diagnostics tool in two countries: Afghanistan and Chad.

3. Annex 2 to this document is the proposed list of pipeline countries and regions prepared based on the above information to assist the discussions at the 13th Meeting of the CREWS Steering Committee, under Agenda Item 3.

4. The list comprises two countries that were included in the previous list: Benin and Bhutan. Ethiopia, was included in the previous list and proposed in the revised list as part of a new regional project covering the Horn of Africa and including Somalia, and Sudan. Other new entries are: Malawi, Senegal, Tanzania, Central-Africa region, Central African Republic, East African region and South-Asia sub-region, covering Bhutan, Nepal and Maldives. The revised pipeline list also includes additional financing for the Caribbean and Niger.

5. Countries and regions included in the CREWS pipeline list demonstrate a sufficient level of eligibility, ownership and readiness for the preparation of project proposals for potential future funding decisions.

[1] Source: United Nations/DESA, as of May 2020. There are 38 SIDS and 47 LDCs with 9 countries that are both an LDC and SIDS. The African continent accounts for 33 LDCs and 5 SIDS.

ANNEX 1 – Criteria for which information is compiled on early warning for LDCs and SIDS.

You can access a table with data for the below criteria at https://www.crews-initiative.org/en/impacts under Effectiveness of CREWS Investment/Mapping.

a. Exposure to risk and institutional capacity for early warning – need
   i. Capacity of NMHSs and disaster management institutions
   ii. Projected average annual loss to disaster (projected cost of disasters for the country's economy per year)
   iii. Casualty loss risk (where available)
   iv. Access and penetration of information and communication technology

b. Level of priority given to early warning systems by countries – demand
   i. Requests for support by country
   ii. Identification of early warning systems as a priority in Nationally Determined Contributions (NDCs) and national development and poverty reduction plans

c. Potential for leveraging additional resources and aligning programmes – leveraging
   i. Potential to leverage investments from other mechanisms such as the Green Climate Fund (GCF), the World Bank Group's International Development Association (IDA), the Global Environment Fund (GEF) and other financing mechanism
   ii. Ongoing or planned national and regional programmes related to the objectives of CREWS

ANNEX 2 – CREWS Draft list of Pipeline Countries and Regions (as of 28 May 2021)

Country (in alphabetical order)	Already in Pipeline List	Indicative Budget (in US$)	Rationale of intervention
Benin	Yes	3.5	A technical request from the Head of the National Meteorological Agency has been received. Disaster Risk Reduction Strategy is being developed and there is an ongoing discussion on possible transboundary cooperation with Niger. Further, a National Framework for Climate Services is developed and helped identify priorities to serve users and for advisory services. Benin needs to modernize its hydromet and climate service system and to continue building resilience to disaster and climate-related risks through: (i) enhancing provision of reliable and accessible weather and climate services; (ii) expanding hydro-meteorological services; (iii) tailoring hydromet information packages to decision makers; (iv) strengthening institutional arrangements and standard operating procedures; (v) establishing a legal framework to improve coverage of EWS; (v) supporting gender-mainstreaming in IDA- funded Hydromet project. The proposed activity will build on efforts undertaken in this country related to EWS and link it up to the continental impact-based EWS for early action and transboundary risk management, currently under development in cooperation with the African Union Commission (AUC), African Centre of Meteorological Applications for Development (ACMAD), Regional Economic Commissions (RECs), African Member States and relevant implementing partners, including WMO. Accordingly, the activity will focus on: - The review of the legal and institutional frameworks, ensuring the chain of responsibility from the generation of EW messages to their dissemination and the activation of mitigation measures is established and effectively working. - Establishment of the open-source web-based platform to exchange and analyze relevant DRR and EWS data to link the national EWS to the continental one. - Capacity building training for the exchange and use of data and information made available through the open-source platform.

			- Participation to joint training with AU, ACMAD, RECs and other Member States for the development of the continental EWS. - Participation to study visits, training and peer review to further enhance effectiveness of EWS, particularly in relation to the development of probabilistic risk scenarios in current and projected climate conditions, to inform impact based EWS for multiple sectors. - Participation in a network of community of experts to further improve modeling and impact—based forecasting capacities of national authorities, including for transboundary risk management. - Participation to the training for the generation/update/tuning of probabilistic risk profiles for impact based EWS for Early Action and Transboundary Risk Management.
Bhutan	Yes	3.5	Bhutan will prioritize establishing end-to-end EWS in key flood affected dzongkhags in an inclusive and gender-sensitive way. Support will also be provided to strengthen capacity of key stakeholder agencies, enhance interoperability of its monitoring systems, improve forecasting capacity and flood risk knowledge and ensure dissemination and communication to affected Dzongkhags and Geogs. Bhutan's good performance provides high likelihood of success in delivery of expected outcomes. There is also ongoing WMO support through RIMES for climate service toolkits and this provides an opportunity to follow-up and scale up support to the Meteorological Service Agency. The Royal Government of Bhutan is in the initial phase of modernizing its hydromet observation systems based on the Roadmap developed (noted above) and while there have been some prior investments with support from development partners in GLOF Risk assessments and Early Warning, there is insufficient support to flood EWS. Priorities include establishing end-to-end EWS in key flood affected dzongkhags in an inclusive and gender sensitive way. This includes improvements of basic weather forecasting and hydrological and flood forecasting, enhanced quality, availability, and transfer of real time climate data in all Dzongkhags, strengthening of hazard and risk assessments, and improving collaboration between the National Center for Hydrology and Meteorology (NCHM), Department of Disaster Management (DDM), Department of Geology and Mines (DGM) and the Flood Engineering and Management division (FEMD) to develop and update vulnerability mapping, improve communication of warnings to communities, and strengthen communities' capacity to respond to warnings in a gender inclusive manner. In addition, a key issue that is affecting NCHM's ability to deliver EW and climate services has been

			its reliance on grant funding from many different sources that has resulted in multiple systems and models with little interoperability and its low capacity in managing its systems. Through CREWS support, end-to-end EWS would be piloted in selected hotspot areas that could be scaled up with leveraged funding from other sources (WB, JICA, GCF).
Horn of Africa Region (including Ethiopia, Somalia, and Sudan)	Yes Ethiopia	4.0	The Horn of Africa experiences significant climate variability, and its population has been struck repeatedly by climatic extremes, which manifest as floods and droughts, resulting in widespread impacts such as food insecurity and the loss of life. There are important reasons for countries in the region to share knowledge and expertise. Regional cooperation has been established through the IGAD Climate Prediction and Applications Centre (ICPAC), of which Somalia, Ethiopia, and Sudan are members, and the Nile Basin Initiative. However, the national capabilities for providing early warnings of disasters, through meteorological and hydrological services as well as taking anticipatory actions are, to varying degrees, hampered by weaknesses in institutional and technical capacities. These limitations can be overcome by a regional project that seeks to exploit and build capacities, and to transfer knowledge and expertise between countries. There is also a significant leveraging potential in the Horn of Africa through ongoing and planned investment projects by the World Bank including 1) Somalia Crisis Recovery Project, 2) Integrated Disaster Risk Management Project in Ethiopia, and 3) a Regional flood management project covering Ethiopia and Sudan, all of which have/will have substantive activities focusing on strengthening hydromet services and EWS. As such, the proposed CREWS project will complement these forthcoming investments, and consists of national activities and regional coordination mechanisms to foster knowledge exchange and increase access to early warning services. **National Level** ***Ethiopia*** The World Bank has been actively working with Ethiopia's National Meteorological Agency (NMA) and the Basin Development Authority (BDA) through technical assistance and the IDA financed OneWASH program to boost capacities in monitoring and data management. The CREWS project will support the development of climate services and impact based early warning systems aligned with Ethiopia's NFCS, ensure a seamless linkage between early warning services and emergency preparedness and response, strengthen the communication link between providers and local users of information, and enhance the capacity of users to understand, utilize and act on climate

			and early warning information products in a gender-inclusive manner. This is in line with a strategic plan for implementing the National Framework for Climate Services (NFCS), covering the period 2020-2030, developed by NMA, under the Ministry of Water, Irrigation and Energy. The project will support the following activities: - Building on the earlier technical assistance and on-going investment projects, it will support Ethiopia to develop impact-based warning, and improve climate information products and services such as agro-met advisory, flood forecasting etc. directly aimed at agriculture, water and DRM decision makers in priority areas as well as indirectly supporting other areas. - Strengthened institutional capacities of the hydromet institutions and enhanced collaboration to better produce and deliver tailored climate information products and services. It will include the development of sustainable partnerships with the private and academic sectors. - Enhanced capacities of the end users to understand and utilize climate information products and services for improved decision making. - Strengthening the last mile connectivity by establishing a communication link between the hydromet and EW information providers and the local users, and also the use of hydromet information and hydromet early warning services for decision making at the local level by supporting the augmentation and operationalization of existing instruments such as Woreda Contingency Plans. ***Sudan*** Technical capacity and infrastructure of Sudan's hydromet services is rudimentary, which impedes the quality of hydromet services including flood early warning, and make it difficult to effectively manage existing and emerging climate risks such as flash floods in non-Nilotic wadi catchments. The frequency and intensity of localized torrential rainfall are rising, which is possibly linked with climate change. While the Nile River system is equipped with a Flood Early Warning System (FEWS), albeit one that is not fully functional, no non-Nilotic wadis are equipped with FEWS, making advanced evacuation and asset protection extremely challenging. Hydromet Infrastructure is also deteriorating. For instance, as of 2019, only 25 hydrometric stations in the Nile River system are functional, whereas more than 50 stations are not operational because of technical capacity gaps in the Sudanese Meteorological Agency (SMA) and Ministry of Irrigation and Water Resources (MoIWR), coupled with lack of technical regulation and guidelines. Against this backdrop, the project

			will support the following activities: - Expansion and rehabilitation of Nile FEWS in selected areas informed by review and analytical works and development of pilot FEWS for selected non-Nilotic wadi ; - Strengthening of the hydro-meteorological monitoring network through the development of a roadmap for a fit-for-purpose hydro-meteorological network as well as technical guideline for management and maintenance of monitoring stations; - Development of a community-based hydro-meteorological monitoring mechanism complementing the national hydromet monitoring network with a particular emphasis on engaging women's groups and schools. - Capacity building and awareness program in selected pilot sites and strengthening linkages between local governments and the civil society. - Capacity development of the civil protection system and communities' response capacity, including the strengthening of the Emergency Operation Centre which is expected to be transformed into the DRM agency of Sudan. ***Somalia*** In Somalia, early warning services are under-developed. Hydrological and meteorological monitoring capabilities are limited, and the institutional arrangements that underpin early warning services are yet to be fully elaborated. Institutional responsibilities are divided between the Ministry of Energy and Water Resources, the Ministry of Humanitarian Affairs and Disaster Management, Ministry of Agriculture and Irrigation, and Civil Aviation Authority (under the Ministry of Air and Land Transport). The World Bank has been engaged with the Federal Government of Somalia to build capacities in hydromet and early warning services. Following a number of technical assistances, the Bank is financing the Somalia Crisis Recovery Project, which directly seeks to address disaster preparedness, including a focus on building hydromet services, including early warning systems. The World Bank has provided technical support to the Ministry of Water to develop a Water Resources Strategy and a Road Map, covering the period 2021-2025. Support for improved early warning services and response are included in the Strategy, which builds upon efforts made under the Ministry of Humanitarian Affairs and Disaster Management to establish a National Multi-Hazard Early Warning Centre and through externally led projects (e.g. the Somalia Water and Land Information System or SWALIM, led by FAO, that has built incipient hydrological and meteorological monitoring capabilities). In addition, support has been provided to streamline and coordination among 4

			agencies mentioned above to form the Hydromet Working Group with aspiration to establish Somalia's National Meteorological and Hydrological Services. The project will support the following: - Supporting the establishment of a national hydrological and meteorological service, through capacity building and technical assistance focused on preparing concepts of operations and detailed investment needs. - Enhancing the infrastructure for and capacities in data management, through supporting the development of data management systems and data analysis approaches. - Building upon activities in the NGO sector, such as the SomReP (Somalia Resilience Program), to boost the uptake of early warning information at the community level. **Regional Level** Regionally, the project will support the following: - Boosting the capacities for regional centers (i.e. ICPAC) to provide early warning services to member states, based on improved modelling and forecasting of extreme events. Regional centers will also provide targeted support to countries with limited capacity, such as Somalia. - Enhanced knowledge exchange between national entities on good practices in early warning services (considering aspects of risk knowledge, monitoring and forecasting, dissemination of warnings, and response capabilities) - Strengthening (institutionally and technically) data exchange between member states to enhance capabilities in flood forecasting on transboundary rivers. - Supporting and strengthening national forecast centers - Boosting flood preparedness and emergency response through the preparation and trialling of pilot flood contingency plans.
Malawi	No	3.0	In Malawi, the WB team is supporting the department of climate change and met services with a reliable on ground monitoring network and on semi-automatizing basic recurrent processes to produce the standard NMHS forecast and early warnings. CREWS support would build on these modernization advances to develop more reliable tools, end-user services and early warning functions, in line with the National Met Policy. Having the basic monitoring and institutional infrastructure sustainably in place, the CREWS investments would boost this strengthened context

			with modern technology to finetune a drought and flood early warning system, design of a soil moisture network, increase the resolution of the weather products and automate forecast and early warning production to reach users earlier with the right content. Financing will also support a coordinated dissemination strategy amongst all government agencies and the media will help reach users timely and with the same message, while district, local authorities and communities will be supported in updating their Emergency Preparedness and Response plans in the light of the new forecast and early warning capability of the country. There is now an operational opportunity to engage. Ongoing investments and policy level engagement can be leveraged. There is sufficient human resource capacity in the field, ongoing project that can be built on (WMO-NORAD project) and coordination with UNDP, DRR agencies and stakeholders are ongoing. FOCUS Africa - Develop climate services in the Southern African Development Community region in four key sectors: agriculture and food security, water, energy and infrastructure. 8 case studies in six countries (Zambia, South Africa, Tanzania, Malawi, Mauritius, Mozambique). The case studies will illustrate how the use of climate science, forecasts and projections can maximize socio-economic benefits in the Southern Africa region and potentially in the whole of Africa. The Norway funded project "Climate Services Adaptation Programme in Africa: Malawi & Tanzania" was the first multi-agency initiative to be implemented under the Global Framework for Climate Services. This flagship Programme helps develop user-driven climate services for food security, health and disaster risk reduction in Malawi and Tanzania. Funded by the Government of Norway, the Programme increases the resilience of people most vulnerable to the impacts of weather and climate-related hazards such as droughts and flooding and associated health risks including malnutrition, cholera and malaria. It also aims to strengthen the capacity to develop and use climate services as well as combine cutting-edge science with traditional knowledge. It represents a unique partnership between climate and social scientists, researchers, development and humanitarian agencies and other key user sectors. Important progress has been achieved by the multiple EWS and DRM initiatives in Malawi, but coordination among key stakeholders is still a challenge. Open exchange of data and information is still very needed. Capacity building for stakeholders involved in monitoring and forecasting should continue. There is also a need to improve and test EWS SOPs and increase coverage of official

			warnings. Testing and assessing the chain of responsibility to transform impact-based people centered EWS into early actions and effective emergency response is also a critical step to save life and investment for sustainable development.
Niger	No	3.0	The ongoing CREWS initiative in Niger has supported technical and organizational capacity of the National Directorate for Meteorology in charge of hydrometeorological forecast, the Directorate of Hydrology responsible for floods management, and the Civil Protection Directorate through various training and technical assistance. Crisis alert and management, as well as response capacity have been reinforced through the development of tools and investments for more accurate weather forecasts, data concentration and dissemination. The development of a national alert code decree has allowed to involve the chain of actors responsible for the dissemination of warning messages (national and private radio and television stations, telephone operators, community radios etc). These initiatives have also allowed the establishment of an Operational Center for Watch, Alert and Crisis Conduct (COVACC) at the office of the Civil Protection directorate and the training of technical and regional administrative managers to better organize relief efforts and develop communal contingency plans. These initiatives have supported WB investments in infrastructure and material notably through the US$106M "Niger Disaster Risk Management and Urban development project" aiming at improving Floods forecasts, community preparedness, allowing for more accurate weather information and a better coordinated response. These improved capacities and resources have proven essential during the unprecedented floods that have hit Niger in 2020, in Niamey and most regions of the country. The DGPC has demonstrated its efficiency to respond and improved ability to disseminate early warnings for evacuation of the exposed population and assess damages quickly after the event. Given the extent of damages caused by the 2020 floods (more than US$300M damages and losses) the WB is preparing a US$250M new investment project that will notably support flood risk reduction infrastructures along with non-structural measures to reduce the vulnerability of communities exposed to flooding including better coordinated Early-warning systems services and strengthening of national institutions involved. Food security is another major threat in Niger and improving capacities to deliver reliable climate information services allowing to better monitor vulnerability, nutrition, and food security to support risk management decision-making is essential. The IDA funded

			"Food System resilience project" currently under preparation will leverage US$13,5M to upgrade food crisis prevention and management systems in Niger through stronger operational capacities of agro-hydro-meteorological services, capacity building, and the development of multi-modal communication channels. The project will improve impact based early warning systems and allow food system users to access sound agro-and hydrometeorological information services for better decision making. Additional support from the CREWS initiative would be necessary to strengthen Digital Hydromet and Agro-Advisory Services and support the timely delivery of essential hydrometeorological information to key users including farmers and urban dwellers. Niger is very vulnerable to droughts and is increasingly becoming affected by floods. Following different initiatives to reinforce EWS in the country, namely the project "Disaster Risk Management and Urban Development" implemented by the World Bank, the Africa Development Bank Climate Information Development and Forecasting Project (PDIPC) and the CREWS Niger Strengthening Early Warning Services there is need to continue capitalizing on the gains of these projects and enhancing EWS capacities. There are several committees/mechanisms involved in EWS in Niger such as the the National Mechanism for the Prevention and Management of Food Crises (DNPGCA), under the Prime Minister's office and the Ministry of Humanitarian Affairs and Disaster Management and the Directorate General for Civil Protection. In the last years, there has been progress in establishing also DRM structures at the decentralized level. Coordination among these several committees should be supported. The ministerial declaration adopted at the 2018 Regional Platform for DRR identified the urgent need to boost the development of effective impact based EWS for early action and transboundary risk management. Data and information available for this purpose are limited in Niger as well as in the entire African Region. There is an urgent need to systematize and harmonize the already available information and make it accessible to relevant stakeholders, according to their roles and responsibilities. Accordingly, support will continue to build also on recent efforts undertaken by UNDRR in Niger. In January 2020, UNDRR held a multi-country policy coherence peer learning exchange on DRR-CCA-SDGs in Niamey, Niger. This peer learning exchange enhanced their knowledge on the convergences and differences among climate change adaptation and disaster risk reduction for operational purposes. They provided recommendations on how to increase policy

			coherence in the region, including the need to reinforce multi-sectorial coordination mechanisms, conducting comprehensive risk assessments, coherent investment and ensuring considerations of climate change adaptation and disaster risk reduction in recovery processes. Through this process, capacities were built in Niger to enable the integration of CCA into the DRR strategy. The proposed activity will build on efforts undertaken in this country related to EWS and link it up to the continental impact-based EWS for early action and transboundary risk management, currently under implementation in cooperation with the AUC, ACMAD, RECs, African Member States and relevant implementing partners, including WMO. While the current implementation has been currently focusing on AUC, ACMAD, IGAD, Ethiopia, Angola, Malawi, UR Tanzania and Zambia, through the coordinated financial support of multiple donors, additional resources are in the pipeline to expand the implementation to the Sahel, including Niger. Accordingly, the activity proposed for implementation will complement other ongoing and planned initiatives and will focus on: - The review of the legal and institutional frameworks, ensuring the chain of responsibility from the generation of EW messages to their dissemination and the activation of mitigation measures is established and effectively working. - Review of existing data sharing mechanisms and support for the exchange on data for EWS purposes. If needed, establishment of the open-source web-based platform to exchange and analyze relevant DRR and EWS data to link the national EWS to the continental one. - Capacity building training for the exchange and use of data and information made available through the open-source platform. - Participation to joint training with AU, ACMAD, RECs and other Member States for the development of the continental EWS - Participation to study visits, training and peer review to further enhance effectiveness of EWS, particularly in relation to the development of probabilistic risk scenarios in current and projected climate conditions, to inform impact based EWS for multiple sectors.

			- Participation in a network of community of experts to further improve modeling and impact—based forecasting capacities of national authorities, including for transboundary risk management. - Participation to the training for the generation/update/tuning of probabilistic risk profiles for impact based EWS for Early Action and Transboundary Risk Management.
Senegal	No	3.0	In Senegal, the WB team is preparing an emergency flood management project to address the catastrophic effects of recent flooding in Dakar and secondary cities. To complement infrastructure investments for flood reduction, the project includes a subcomponent on Integrated Early Warning Systems (IEWS) that aims to strengthen the institutional capacity of Hydromet service providers and first responders (e.g., the Central Emergency Preparedness and Response actors, the National Emergency Operation Center and local authorities) as well as the local capacity of exposed communities to reduce their vulnerability. In that sense, the IEWS is critical to providing adequate climate services (e.g., forecasts and early warning information communicated in accessible language) and to facilitate the early actions of both first responders and affected populations (e.g., contingency plans, community-based interventions, etc.). The IEWS is also deemed instrumental in supporting the operations and maintenance of the built stormwater drainage systems as it will contribute to the long-term urban resilience of Dakar and select secondary cities. The support from CREWS is required to provide further technical assistance for the design and implementation of the IEWS, scale up workshops on community participation and gender and to promote knowledge exchange on best IEWS practices from previous and ongoing experiences in the region. There is sufficient human resource capacity. The Senegal Meterological Agency is also an accredited regional resource center of WMO and supports African states in severe weather forecasting. Other initiatives can be scaled-up such as SWIFT (Met Office) that makes research advances significant for improvements in weather forecasts in Africa, and the tropics more generally, from the hourly to the seasonal timescale.
Tanzania	No	1.0	Tanzania has been among the beneficiaries of the pilot action which led to the development and endorsement of the Africa road map for improving the availability, access and use of disaster risk information for early warning and early action, including in the context of transboundary risk management.

			The proposed initiative will build on this work and will benefit from the synergies resulting from the implementation of similar activities in Malawi and Zambia, particularly in relation to exchange of data and for transboundary risk management. Institutions involved in the EWS phases are committed to their mandate and some resources (human and budgetary) are recognized by the government in support of the institutions' respective mandates. However, warning messages are only loosely connected with impact scenario descriptions, which results in actions recommended to the population being too general. A closer connection between the severity of the forecasted event, its impact and the actions recommended at different levels, from the civil protection system, down to the population should be sought. The available risk information is sparse and insufficiently consolidated to support preparedness and EWS. Historical data related to flood and droughts, as well as for other hazards, are being updated and this initiative should be further supported. Tanzania aims at improving the monitoring and forecasting services by increasing the use of automated measurement stations (e.g. precipitation, discharge) and initiating advancements in the technological and scientific tools in support of the monitoring and forecast system. Operational capacity of the EOC that should provide a 365/24/7 service implementing fail-safe systems and standardized procedures for the issuing of warnings. Improvements are needed in the means used for communication to enhance EWS coverage.
Central-Africa region	No	3.0	The engagement will build upon (i) the SAWIDRA project funded by the European Union through the African Development Bank, (ii) the ClimSA project funded by the European Union and supported by WMO and (iii) the EU-funded GFDRR R2 project, which supported the Economic Community of Central African States (ECCAS) Hydromet Forum on 4-6 May 2021. These projects have identified the key risk hotspots in the subregion, have identified priority investment needs in National Meteorological and Hydrological Services (NMHSs), and have put in place the favorable conditions towards the setup of a Regional Climate Center in Douala, which is going to become operational soon with support from ECCAS and EU. The CREWS Central Africa project will help address priorities related to regional cooperation in order to enhance the efficiency of NMHSs and other EWS stakeholders. Specifically, it will support

			the accreditation and strengthening of regional centers for severe weather forecasting, building on an Agreement with RSMC Dakar dated April 2021. It will also organize regional cooperation for weather and climate data exchange, training of meteorologists and hydrologists, and flood forecasting. In addition, the project will take over from the GFDRR R2 project and continue enhancing the disaster risk knowledge as well as working on regionally agreed-upon approaches for early warning with a multi-hazard approach.
Central African Republic	No	3.0	A World Bank investment request was submitted to the Board and depending on resource availability can be scaled-up with CREWS support. CAR is seeking to improve its Hydromet and climate services through the establishment of a functional flood EWS in selected watersheds. CREWS CAR will also support the strengthening of institutional capacity through technical assistance to key Hydromet service providers and end-users. The TF will also support the establishment of a drought forecast-based financing, an early action mechanism to deal with the prevailing drought events in the north and northeast parts of the country and to minimize its impact on agriculture, food security, livestock among others. An investment/funding will be sought to support the financing component of the Drought FbF mechanism and the acquisition of selected observation equipment.
East Africa Region	No	4.0	Lake Victoria and its surrounding area are subject to major weather-related shocks, leading to loss of life and significant economic damages for coastal communities. Furthermore, these impacts are projected to increase with climate change. A CREWS East Africa-Lake Victoria project will address these risks by scaling up integrated and collaborative regional Early Warning Services (EWS) and implementing an agreed EWS Vision 2025. The project will focus on supporting the six East African Community (EAC) partner states, including Burundi, Kenya, Rwanda, South Sudan, Tanzania and Uganda. Additionally, it will aim to deliver impact-based early warning services across Lake Victoria and surrounding Lake communities and expand these out to the East Africa region. It is important to note, that a CREWS project in East Africa will help to ensure continuity of investments and support in the region by bridging current and future investments. For example, it will build upon and immediately continue the investments made from the WISER High Impact Weather Lake Systems (HIGHWAY) project. Furthermore, it will prevent any delays in future investments, which will be critical in the overall success of current and future support to East African countries. A CREWS East Africa project will do so by delivering activities aimed at 4 objectives: • To establish an effective framework for the mandated institutions to enable the Regional EWS to be enhanced and sustained.

			• To improve access to all operational data sources to support and sustain the generation of a Regional Early Warning Services. • To strengthen and mainstream the links and co-production between clients and producers to ensure EWS products and services are relevant. • To raise awareness of the benefits of the co-production process of EWS products and services with clients, intermediaries, government agencies and producers. There are a number of ongoing and recently completed projects in East Africa, which represent significant leveraging potential, including the Agricultural Climate Resilience Enhancement Initiative (ACREI) and Aircraft Meteorological Data Relay (AMDAR) Kenya which have/will have substantive activities focusing on strengthening hydromet services and EWS.
South-Asia sub-region, covering Bhutan, Nepal and Maldives	No	4.0	South Asia is exposed to a variety of hazards from avalanches and earthquakes to glacial lake outburst floods (GLOF), drought, floods, and cyclones. It is home to nearly a quarter of the world's population, who are increasingly living in dense urban areas. Most importantly, many countries in the region share common geological formations and river basins, and natural hazards frequently transcend national boundaries. WMO has been engaged through various initiatives/forums in the region such as the Tropical Cyclone Porgramme, the Severe Weather Forecasting Programme (SWFP-South Asia), South Asia Flash Flood Guidance System, Pakistan and Afghanistan Regional Flash Flood Guidance System (PARFFGS), South Asia Climate Outlook Forum, HydroSOS pilot studies across the Ganges-Meghna-Brahmaputra basin, to name a few. The region still faces immense challenges, which require a range of options to strengthen regional cooperation for resilience. Some key elements to be addressed include: 1. Improve the potential of regional cooperation 2. Capitalize on existing initiatives and deploy new technologies, including the seamless integration of various systems 3. Implementation of risk-informed policies and investments There is opportunity to take advantage of data exchange cooperation and support its improvement. The focus can be on regional centers not performing optimally. Support for overall coordination between meteorological office and NDMOs, improving risk knowledge (disaster loss data and improved vulnerability assessment to enable Impact-Based

			Forecasting, inclusive (gender and disability inclusive risk communication) and preparedness-early action can be provided.
Additional Caribbean	No	1.0	Additional financing to provide technical assistance within the current project to: - Strengthen institutional capacities for early warning response and for Impact-Based Forecasting, including defining clear mandates, roles and responsibilities between national and regional stakeholders; - Ensure alignment of the CREWS MHEWS strategy with the different National DRR strategies; - Secure coherence and synergies between the CREWS MHEWS strategy with those existing or under development for other non-climate related EWS (e.g. geohazards, biohazards, etc); - Strengthen the focus on the most vulnerable by ensuring the sustainability of the inclusive approach and people-centered EWS; - Increase the understanding of communities and individuals' risk and EWS perceptions concerning the way how warnings are being delivered and received, as well as, about the different actions that communities are implemented upon reception of the warning (response capabilities); - Strengthen private sector's role in EWS, through ARISE and CARICHAM networks as institutionalized anchors, including the promotion of private sector investments in EWS; - Work with regional stakeholders for learning co-generation and knowledge sharing, through collection and dissemination of evidence, including analysis of challenges, lessons learned and best practices. These activities are planned based on the request of different regional and national partners, in order to strengthen the response capabilities of institutions and communities. Similarly, they aim to incorporate the Impact Based Forecasting approach evolution required by all involved stakeholders. Additionally, there is potential for leverage of all SIDS by combining the proposed actions with other ones being developed in the framework of other non-climate related hazards early warning systems initiatives.