CREWS Project Presentation Note to the Steering Committee		
Project Title	CREWS Djibouti	
Document Reference	CREWS/CProj/16/Djibouti	
Geographic coverage	*Djibouti*	
Timeframe	2024 - 2028	
Total CREWS Contribution	US$ 3,689,430	
Lead Implementing Partner	World Meteorological Organization (WMO)	
	a. Execution	US$ 2,211,000
	b. Fees (Project Support Cost - 13%)	US$ 287,430
	c. Total	US$ 2,498,430
Additional Implementing Partners	United Nations Office for Disaster Risk Reduction (UNDRR)	
	a. Execution	US$ 1,054,000
	b. Fees (Project Support Cost – 13%)	US$ 137,020
	c. Total	US$ 1,191,000
Main objective(s)	To strengthen the capacity of national Djiboutian authorities to produce, deliver and disseminate Multi-hazard Early Warning Systems, preparedness, early action and response to hazardous hydrometeorological events impacting the country.	
Project Recipient/ Beneficiary *(people and organisations at risk who are the intended beneficiaries of the project at impact level)*	The project directly and indirectly impacts the 1.1M inhabitants of Djibouti, notably those that live in hazard-prone areas and regions. While all project outcomes aim to benefit the overall national population, specific activities are tailored to support those living in areas particularly impacted by floods and droughts, especially in selected watersheds in the north, west and east of Djibouti, including the Ambouli watershed in the district of Djibouti. These areas have been particularly impacted by floods and storms in the last 10 years and where most lives and properties were lost. Project benefits to impacted populations will be indirect, via investments to hydrometeorological infrastructure and disaster risk knowledge, and direct, through the work of the Red Crescent Society of Djibouti in specific communities.	

Additional Operational Partners *(intended direct beneficiaries of the project in the form of increased capacity, products and services the project will deliver)*	**National** National Meteorological Agency/Agence Nationale de la Météorologie (ANM) Center for Scientific Studies and Research of Djibouti / Centre d'Etudes Scientifiques et de Recherche de Djibouti (CERD) Secrétariat Exécutif de la Gestion des Risques et Catastrophe (SEGRC) The National Red Crescent Society of Djibouti (RCSD) **Regional** IGAD Climate Prediction and Applications Centre (ICPAC) Regional Specialized Meteorological Centre (RSMC) Nairobi Regional WIGOS Centre (RWC) East Africa	
Initial state of play	a. Vulnerability, exposure to risks, disasters impacts (on people and economy)	Djibouti's location at the convergence of the Red Sea, Gulf of Aden, and East African rift systems, combined with its arid to semi-arid climate, increases its susceptibility to climate-related hazards. This is exacerbated by limited water management, excessive exploitation of its scarce groundwater resources, high levels of poverty, rapid population growth (particularly in urban areas which are home to over 77% of the population)[1], and ineffective land use planning and building regulation. Approximately 33% of Djibouti's population of 1,120,849[2] resides in high-risk areas, with nearly 35.3% of the country's economy being vulnerable to natural threats. The country faces many challenges, and its vulnerability is characterized as complex and intersecting, with the additional challenge of limited government capacity. According to assessments conducted by INFORM[3], Djibouti's coping capacity is evaluated as low across all dimensions (institutions, infrastructure, socio-economic, etc). Over the last four decades, natural disasters have affected over a half million people in Djibouti. The country is substantially vulnerable to a variety of weather-, climate- and water-related hazard events and shocks, such as droughts, heat waves, floods, landslides, wildfires, and sea level rise. In particular, Djibouti has been notably susceptible to flash flooding, inundations, and storm surges – particularly in the regions of Obock, Tadjourah, and Dikhil, as well as in Djibouti city. Past disasters have impacted livelihoods, damaged infrastructure, and led to loss of life. For instance, Tropical Cyclone Sagar caused significant damage to Djibouti City and the suburb of Balbala in May 2018. The results of the Rapid Damage, Loss and Needs Assessment in the aftermath of the cyclone indicated that damage in three communes in Djibouti

[1] Rapid urbanization continues to present challenges within East Africa, as the region is one of the most rapidly urbanized in the world (Urban population growth | READ online (oecd-ilibrary.org)). This continues to have a profound effect on the disaster risk profile within East African countries, given the growing concentration of people and assets in high-hazard areas.
[2] https://data.worldbank.org/indicator/SP.POP.TOTL?locations=DJ
[3] INFORM is a multi-stakeholder forum comprising the Inter-Agency Standing Committee and the Joint Research Council of the European Commission.

		City amounted to up to 5 billion Djiboutian Francs (approximately US$29 million). Certain sectors were affected more severely than others, notably transport, water, sanitation, and housing. More recently, in 2019 and 2020, flash floods impacted an estimated 200,000 people, some 18,000 households and basic infrastructure in the capital region of Djibouti City.[4] Djibouti has also been exposed to multi-year droughts that compound the effects of aridity and exacerbate water scarcity. During the past 30 years, Djibouti has experienced a total of eight significant droughts. Between 2008-2009 and 2010-2011, the country faced severe droughts and food shortages that impacted 340,000 and 200,258 people, respectively. Among the most prone regions to such disasters are the Obock, Tadjourah, and Dikhil regions, collectively representing a potential population exposure of 16%[5]. Both the 2008 and 2011 droughts claimed nearly 4% of GDP annually, causing upwards of US$52 million in damages, and more than US$157 million in losses[6] Certain areas in Djibouti, including Obock and Tadjourah, are also highly exposed to landslides, which often affect critical infrastructure such as health clinics (9% - 6 units), hospitals (7% - 1 unit), schools (12% - 15 units), and electronic grids (8% - 18km) (Pacific Disaster Center, 2022). The adverse effects of climate change are expected to result in more intense precipitation events in Djibouti, thereby increasing the risk of flooding, flash floods, and landslides and multiplying the risk and intensity of water scarcity and drought across the country. Agriculture will be particularly affected by these adverse effects, as decreased rainfall during critical grazing and planting periods are expected to have significant negative consequences. Higher temperatures with increased aridity may also lead to livestock stress and reduced crop yields.[7] This is likely to result in significant economic losses, damage to agricultural lands and infrastructure as well as human health and mortality. Moreover, land degradation and soil erosion, exacerbated by recurrent flood and drought adversely will impact agricultural production, further affecting the livelihoods and food security the rural poor, given the limited resources with which to influence and increase adaptive capacity (World Bank, 2021).[8]
	b. Status of the EWS, DRM institutions and NHMSs, actors / players present	**<u>Regional Level</u>** ICPAC, the Regional Climate Centre accredited to the WMO, based in Nairobi (Kenya) provides climate services to eleven countries in East Africa, including Djibouti. It provides services and information

[4] World Bank, 2022

[5] Pacific Disaster Center, 2022

[6] World Bank, 2022

[7] ACP-EU (2017). Natural Disaster Risk Reduction Program. Djibouti: Drought Post Disaster Needs Assessment. URL: https://www.gfdrr.org/en/djibouti-drought-post-disaster-needs-assessment

[8] Djibouti (2013). Second National Communication to the UNFCCC. URL: https://unfccc.int/sites/default/files/resource/djinc2.pdf

		on agriculture and food security, climate forecasting, disaster risk management, water resources and capacity development of NMHSs. In October 2021, ICPAC launched the Disaster Operations Center, which includes a situation room for monitoring major hazards and providing regional early warnings for drought, floods, extreme rainfall, food insecurity, or pests like the desert locust. ICPAC has a long track record as an active executing agency in development projects. Also, at the regional level, RSMC Nairobi provides countries in the region, including Djibouti, 3-day forward guidance on severe weather such as heavy rain, strong winds, large waves (coastal areas of western Indian Ocean) and dry spells, through the Severe Weather Forecasting Programme (SWFP). The demonstration (pilot phase) of SWFP in Eastern Africa began with a technical planning workshop in Nairobi in October 2010 with participation of six countries of the Eastern Africa region. Today, there are nine participating countries in the SWFP Programme, including Djibouti (since May 2023). In later years, several training workshops were organized to develop capacity of NMHSs on NWP products' interpretation and use in severe weather forecasting and delivery of warning services. The RWC East Africa is jointly hosted by Kenya and Tanzania and encompasses all the East African Community (EAC) countries. The Kenyan Meteorological Department (KMD) and the Tanzania Meteorological Authority (TMA) attend to different and complementary functions of the RWC, which aims to advance the implementation of WIGOS within the EAC region, to provide regional coordination and technical support to Members in the region. In this regard the primary, mandatory functions of the RWC are to support the Members in the EAC region with the management of metadata in OSCAR/Surface and to assist with following up on quality issues identified via the WIGOS Data Quality Monitoring System. KMD is also the Regional Instrument Centre (RIC) for East Africa tasked with supporting NMHSs in the region to maintain relevant calibration standards and assisting in calibrating their national meteorological and related environmental standards and monitoring instruments[9]. **National Level** In Djibouti, meteorological services are exclusively provided by ANM. The provision of climate and hydrological services is fragmented: climate services to the agricultural sector are provided by the Directorate of Rural Hydraulics / Direction de l'Hydraulique Rurale (DHR), part of the Ministry of Agriculture, Livestock and the Sea, in charge of Water Resources. Likewise, studies on climate change are coordinated by the Department of the Environment and Sustainable Development / Direction de l'Environnement et du

[9] https://community.wmo.int/en/activity-areas/imop/Regional_Instrument_Centres/ric-kenya

		Développement Durable (DEED), part of the Ministry of Housing, Urbanism, Environment and Land Planning. Hydrological monitoring, forecasting and services are primarily based on the telemetry system managed by the CERD. Alerts, however, be it meteorological or hydrological in nature, are always issued by ANM through existing collaboration protocols between both agencies. Disaster-risk management is the responsibility of the SEGRC, under the Ministry of the Interior, in collaboration with the National Directorate for Civil Protection / Direction Nationale de la Protection Civile (DNPC).
	c. Projects and programs dealing with EWS and hydromet under implementation or preparation	There are multiple projects and programmes on hydrometeorology and Early Warning Systems (EWS) in Djibouti and in the greater Eastern African region, currently under implementation or recently completed. Synergies and complementarities with these projects will be ensured in order to avoid duplication and enhance cooperation towards strengthening EWS in the country. • **The Climate Change Adaptation project in Djibouti** (2015-ongoing) funded by UNDP aims to enhance the capacity of the country in climate change adaptation. Amongst its main contributions, the project has produced climate change-related strategic and policy documents for Djibouti, such as National Adaptation Plans (NAP), and the Nationally Determined Contributions of the Republic of Djibouti (NDC); climate change scenarios/projections for Djibouti; and the development of the GCF NAP Readiness project proposal aligned with the "Vision Djibouti 2035". • The **sustainable management of water resources, rangelands and agro-pastoral perimeters in the Cheikhetti Wadi watershed of Djibouti** (2018-2024) is another project funded by UNDP. It aims to promote an integrated model for the restoration of agropastoral ecosystem services in the Cheikhetti watershed to reduce land degradation, improve self-sufficiency in basic living needs of vulnerable rural communities and create conditions to enable its replication with a strong community involvement. • The **Djibouti – Emergency Food Security Crisis Response Project** (2022-2025) is a project funded by the World Bank aimed at contributing to mitigating food security risks posed by food supply shocks and drought in Djibouti. In particular, the project finances: (a) the improvement of access to water, through the rehabilitation of water infrastructures, the purchase of equipment for the repair of water infrastructures, as well as the acquisition, operation, and maintenance of water trucks and vehicles; (b) the restoration of agricultural and pastoral livelihoods through the provision of agricultural inputs, greenhouses, assets and inputs for livestock production, as well as technical assistance and training on climate resilient

		practices and technologies; and (c) the design of a drought warning system, the preparation of a rapid response plan and the operationalization of the drought warning system. The project includes selected agro-pastoral activities that aim to support Djibouti's adaptation to climate change in the long term. The project activities are implemented in the five regions of the country and in the peri-urban area of Djibouti City, all of which have been affected by recent droughts. • UNDRR Regional Office for Arab States (UNDRR ROAS) has been supporting the Government of **Djibouti** in updating its **National Strategy for Disaster Risk Reduction and its National Coordination Platform for Disaster Risk Reduction** (ongoing)**,** representing an opportunity to address immediate cross-cutting government capacity needs while formulating longer-term institutional support for the long-term investment and sustainability of this project. • The development objective of the **First Phase of the Emergency Locust Response Program Project for Djibouti, Ethiopia, Kenya, and Uganda** (2020-2024) of the World Bank is to respond to the threat posed by the locust outbreak and to strengthen systems for preparedness. The project comprises surveillance and control measures to limit the growth of existing desert locust populations and curb their spread, while mitigating the risks associated with control measures and their impacts on human health and the environment. It consists of following sub-components: (i) continuous surveillance; (ii) control measures; and (iii) risk reduction and management. The project also comprises livelihoods protection and rehabilitation objective to help protect the poor and vulnerable in locust affected areas. It consists of following sub-components: (i) safeguarding food security and protecting human capital; (ii) rehabilitating agricultural and pastoral livelihoods; and (iii) assessing impacts and targeting response. The project also aims to coordinate and prepare early warning to strengthen the regional and national capacity for surveillance and control operations. • WMO is implementing the **Severe Weather Forecasting Program** (2019-ongoing) covering 80 countries. It aims to strengthen the capacity of WMO Members to deliver improved forecasts and warnings of severe weather in order to save lives and livelihoods and protect property and infrastructure. In the East Africa region, Djibouti has recently joined the programme, in May 2023. The project has supported NMHSs in the region to improve forecasts for severe weather events that include heavy rain, strong winds, and dry spells.

		• The **Climate Data Rescue in East Africa** (2018-2022) is a development project funded by the African Development Bank (AfDB) and implemented by WMO with the support of UKMet Office. The project's main objective was to improve the climate services in Djibouti, Swaziland, Uganda and Zambia by increasing the availability of climate data, enhancing its analysis and the capacity to generate products, which meet the needs and requirements of the users. Climate change and climate variability analysis requires that all the necessary climate data is digitized and archived in a Climate Database Management System (CDMS), which was part of the project scope. • The **Co-production of Climate Services in East Africa** (**CONFER**) (2020-2024) is a multi-national collaboration project coordinated by NORCE, which is based in Norway, to bolster resilience to climate impacts and reduce disaster risk in East Africa, potentially reaching 365 million people in eleven countries, including Djibouti. The main objective is to co-develop dedicated climate services for the water, energy and food security sectors with stakeholders and end-users, to enhance their ability to plan for and adapt to seasonal climate fluctuations. CONFER secure end-user engagement; improve on the accuracy and local detail of numerical prediction model outputs for East Africa, with a particular focus on seasonal prediction; and develops statistical and machine learning tools to obtain a new level of seasonal forecast skill based on numerical models and high-resolution satellite data. • The AfDB-funded a project **Enhancing the use of high-resolution satellite data to generate severe weather forecasts for effective Disaster Risk Management (DRM) in Eastern Africa** (2016-2020), within the scope of the Satellite and Weather Information for Disaster Resilience in Africa (SAWIDRA) program aimed at enhancing the regional Numerical Weather Prediction (NWP) capacities, including acquisition and assimilation of high-resolution satellite data; strengthening the capacities of the NMHSs in eastern Africa, including Djibouti, to receive NWP model datasets or to run national-scale NWP models in order to provide improved early warnings of extreme weather events to their respective DRM agencies; and demonstrating the use of severe weather forecasts in flood risk management and share experiences among all NMHSs as well as to make use of lessons learned for upscaling in the region. • The **Intra-ACP Climate Services and related Applications Programme (ClimSA)** (2021-2027) funded by the European Union (EU), is fostering sustainable development in the region by addressing the existing gaps and mainstreaming climate services into policy processes at regional, national, and sub national levels. ClimSA's main implementing

		partner in East Africa is ICPAC and is supporting a number of activities in the region (including Djibouti). First, it supports stakeholder-driven identification of region-specific priority needs and products via Regional Frameworks for Climate Services and National Frameworks for Climate Services and user stakeholder national and regional consultations. Second, it supports the provision of expert advice on country-level delivery of services, validation of the results of the use of the products generated, and the associated socio-economic benefits. Third, it is promoting the operational exchange of data and products between NMHSs at country level and WMO Regional Climate Centres. Fourth, it is equipping Regional Climate Centres and Djibouti National Meteorological Service (ANM) with PUMA and Climate satellite workstations (see technical specifications). Last, it is promoting the exchange of knowledge and best practices across the regions, and support with content development for the Intra-ACP Climate Services Annual Fora. • The completed **Weather and Climate Information Services for Africa (WISER) support to ICPAC (W2-SIP)** (2018-2021) project provided for the development, uptake and use of sub-seasonal, seasonal and long-term timescale products and services for regional applications. ICPAC was supported through the project and the project resulted in ICPAC's move to an objective forecasting approach has been a huge leap forward, supporting the development of a new range of customized seasonal services delivered by NMHSs in the region. Allied to this, the project enabled stakeholders to become much better equipped at interpreting and using climate services and promoted a shift in the thinking of climate information producers from the usual supply-driven to user driven climate services through application of innovative co-production practices. • The completed **Hydrological Cycle Observing System (HYCOS) Project implemented by the WMO in partnership with the Intergovernmental Authority on Development (IGAD), and funded by the EU** (2012-2017) aimed to promote sustainable and integrated water resources development and management in the Horn of Africa, including in Djibouti, through enhancement of regional cooperation and collaboration in the collection, analysis, dissemination and exchange of hydrometeorological data and information for water resources assessment, monitoring and management. Particular successes of this project included the transmission of hydrological data regionally through ICPAC. • UNDP, FAO and WFP are preparing the development of an Early Warning Systems-focused project to be submitted to the **Green Climate Fund (GCF)**, which will focus particularly

		on the development of climate services and the strengthening of ANM's capacities to produce and provide early warning services. The project is expected to be submitted some time in 2024 for review and approval. • Djibouti is a selected **SOFF country**. Preliminary technical consultations in the country (which took part alongside the CREWS Djibouti technical scoping mission in November 2023) identified the key infrastructure needs and gaps that will be addressed by SOFF in the country. The observational infrastructure is expected to be delivered in the country during the programme's implementation phase.
	D. Describe the multiplier /leveraging potential of the CREWS investments	There is a significant leveraging potential in Djibouti, of approximately USD28M through ongoing EWS and DRR projects being implemented by Development Partners in the region, such as the EU, through the ClimSA; the AfDB's Enhancing the use of high-resolution satellite data to generate severe weather forecasts for effective Disaster Risk Management in Eastern Africa, the CONFER project; the already completed IGAD-HYCOS project, the Climate Data Rescue project recently implemented by WMO in Djibouti; SOFF investments in GBON-required observational infrastructure; and the GCF Early Warning Systems project being developed by UNDP, FAO and WFP. The proposed CREWS Djibouti project will support the design and implementation of forthcoming investments and serve as basis and provide best practices for future EWS and hydrometeorological initiatives to be implemented in the country and in the region. In particular, the CREWS investment in Djibouti will leverage on the planned SOFF acquisitions and the experience and knowledge of the selected SOFF Peer Advisor in Djibouti (Geosphere Austria), especially in terms of capacity building activities tailored to ANM staff to better produce forecasts. This alignment was made during the CREWS technical scoping mission to Djibouti in November, in which the project development team joined the SOFF technical mission in Djibouti to better identify needs and gaps on capacity, and how to complement investments in infrastructure and information technology between the two initiatives. In conversations with the SOFF secretariat and the WMO Infrastructure Department, it was highlighted that coordination between both initiatives is not only deemed important, but extremely necessary. Efforts will be made by both CREWS Djibouti Project Team and SOFF implementers (UNDP with the technical support of Geosphere Austria) to ensure full alignment in terms of technical specifications, and whenever possible procurement, of infrastructure being invested in Djibouti. It was mentioned how SOFF's sustainability-related activities could also benefit CREWS infrastructure investments, especially to what it regards to capacity building of personnel for the gathering and maintenance of stations. From the CREWS Djibouti project side, an activity on "Development of guidance and plan on sustainability of infrastructure

		investments" will be included under Outcome 3 of the project proposal to further complement sustainability efforts related to infrastructure. Another significant multiplier potential is the future GCF project being developed by UNDP, FAO and WFP. Discussions on the development of this project have taken place during and following the CREWS technical scoping mission in Djibouti in November 2023. Both projects have agreed to share their project plans and coordinate the implementation of activities tailored at the ANM. An overall opportunity identified was the prioritization by the GCF project of climate services-related activities, including potentially carrying on the National Climate Outlook Fora, and development of climate services for specific tailored sectors. CREWS investments would be focused on the strengthening of the technical and human capacity of ANM, preparing the organization for better developing climate services under a future GCF project. Finally, but not least importantly, CREWS has also invested in two regional projects in the East Africa region including CREWS Horn of Africa in 2022 and CREWS East Africa in 2023, the results of which are already beginning to bear fruit. This project will benefit from the connection to regional organizations such as ICPAC – also implicated in the CREWS Horn of Africa and East Africa projects – of which Djibouti is also a member. Peer to peer technical support, gender-related activities and training, regional coordination and risk elements with transboundary effects further benefit from integration across CREWS-supported countries in the region.
	e. Describe measures to ensure coherence with existing initiatives	The CREWS implementing partners, WMO and UNDRR, will bring their expertise and draw on key engagements with national institutions and stakeholders in Djibouti. As this project progresses, this strong engagement will ensure continuity and guarantee the realization of its outcomes, especially through capacity development, institutionalization, and development of standards, for sustained benefits at local and national levels. Coherence with existing initiatives will be ensured by leveraging existing coordination mechanisms not only at the national, but also regional levels – ensuring that the project benefits from existing regional mechanisms and networks of climate centers, such as WMO's Regional Climate Centre (RCC) ICPAC, RSMC Nairobi and RSMC Dar Es Salaam and RWC East Africa – notably in capacity development, technical support and data exchange. Through ongoing and recently completed initiatives in Djibouti, such as the SWFP Programme and the Climate Data Rescue in East Africa project, WMO has had strong engagement with national stakeholders in Djibouti. Furthermore, project activities are designed with ongoing initiatives (both national and regional) in mind and aim to ensure maximum complementarities between projects. Additionally, the WMO team consists of individuals from the WMO Office for Eastern and Southern Africa in Nairobi, Kenya, and at the WMO Regional Office in Addis Ababa, Ethiopia who have

		strong relationships with the government counterparts in Djibouti, including ANM and CERD – who have been directly consulted and contributed to the development of this proposal to ensure alignment and transparency in the project development process. UNDRR ROAS has long-standing engagement with SEGRC on Sendai Framework Monitoring, capacity development in climate risk management and risk assessment methods, and increasingly, on strengthening disaster loss accounting. Aligned to the Early Warnings for All (EW4All) Initiative, especially Pillar 1 on Risk Knowledge, UNDRR will prioritize support to strengthen institutional collaboration between SEGRC, ANM, and other local pillar leads for EWS. Alignment and leveraging of all project activities will be ensured with existing WMO-led initiatives and programmes, including EW4ALL and SOFF. In fact, preliminary alignment between the three initiatives was already established during the development of the CREWS Djibouti project (including during the technical validation meeting that took place in November 2023 in Djibouti), ensuring full benefit by the country of a coordinated approach between these initiatives in term of resource allocation, strategic planning, and relationships with national institutions. Particular leveraging will also be ensured with the UNDP, FAO and WFP-led project proposal to GCF on Early Warning Systems. Discussions with the implementing partners already took place in order to ensure coherence and complementarity between the CREWS and GCF financing, in special to what it regards to activities related to the development of climate services. Given the different timeframes of the different initiatives mentioned above, and considering that CREWS Djibouti is the most advanced proposal as of the time this document was written, concrete information on the leveraging is yet not available. Further details on potential co-financing, collaboration and synchrony between SOFF, EW4ALL and GCF will be available at a later stage.
Project Rationale	a. Who, where and in what ways and to what hazards people and ecosystems are exposed and vulnerable	Djibouti is considered highly vulnerable to climate change and is expected to experience adverse impacts from increased temperatures and aridity, as well as reduced precipitation, resulting in longer periods of drought. Additionally, the more frequent occurrence of intense rainfall will lead to a heightened risk of flooding and flash floods. Presently, an estimated 33% of the population lives in high hazard risk zones and 35% of the economy is chronically vulnerable to drought and floods.10 Socio-economic and environmental implications particularly affect water resources, agricultural and livestock, coastal zones, health, and tourism sectors.11

[10] GFDRR (2016). Country Profile – Djibouti. URL: https://www.gfdrr.org/en/publication/country-profile-djibouti-0

[11] Djibouti (2014). Second National Communication to the UNFCCC. URL: https://unfccc.int/sites/default/files/resource/djinc2.pdf

		As an arid country with little arable soil; nearly 90% of Djibouti is classified as desert, with approximately 9% considered as pasture and about 1% forest. As the country is largely unsuitable for agriculture, Djibouti imports nearly all of its food. However, 78% of the poor population live in rural areas. Therefore, prolonged droughts have a significant impact on Djibouti's rural regions, specifically in Obock, Tadjourah, and Dikhil, with farmers and livestock herders being the hardest affected. The extended drought across Djibouti from 2008 to 2011 decreased the country's GDP by 4%. Additionally, the agriculture sector lost 50% of its GDP, directly impacting over 15% of the population (World Bank, 2021). The effects of droughts result in chronic food insecurity for 28% of the population, inadequate food consumption for 55% of rural residents, and diminished livestock holdings for 22% of households. As mentioned above, the country is also affected by an increase in the frequency and intensity of heavy precipitation resulting in mudslides, flooding and flash floods. These events have an important influence on Djibouti's capital, Obock, Tadjourah, and Dikhil. In the past years, this has led to a potential economic loss amounting to US$ 3.5 billion, impacting critical infrastructure such as airports (5 – 45%), fire stations (4 – 100%), hospitals (11 – 73%), and schools (85 – 70%). In addition, it is estimated that 643,077 (72,6%) of Djibouti's population are exposed to this type of hazard (Pacific Disaster Center, 2022). As Djibouti experiences the compound and cascading effects of multiple hazards, the need to find cost-effective ways to improve national impact-based Multi-Hazard Early Warning Systems (MHEWS) is growing. To ensure risk-informed decision-making, the country should continually improve the application of risk data and information to improve its MHEWS and to inform efforts resilience and institutional capacity at the subnational, local, and community levels. In line with the Djibouti National Disaster Preparedness Baseline Assessment 2022 from the Pacific Disaster Center (PDC), it is essential to update the legal framework to support national and community disaster preparedness and response, a core pillar of the EW4All Executive Action Plan. The country further needs to build human resource capacity, investing in training and exercise programmes for disaster readiness, response, and recovery for all the key hazards described in this document. It is also crucial to implement a standard incident management system aligned to the Catalogue of Hazardous Events (CHE) at all levels of government and develop/upgrade early warning systems for hydrometeorological events, reinforcing structured database systems and expanding the network of flood and drought monitoring capabilities. In accordance with the Roadmap on Djibouti's Hydromet and EWS and Services developed by the World Bank in 2022, stakeholders need information on the impacts of these hazards to better inform and alert the public and socio-economic sectors. Information is also

		a basis for public policies and operations, from post-disaster emergency to long-term development and resilience, often with key international and NGO partners. Information is thus needed at various time scales, ranging from nowcasting (0–6 hours) in the case of flash floods to seasonal and longer-range forecasts for planning and preparedness activities, particularly in the water resources management and agriculture sectors. In addition, warnings need to be country-wide, but also relevant to specific, impacted locations. Understanding of risk at Djibouti national and local levels will help the development of hazard mapping and risk profiles based on reference periods or other benchmarks. Understanding risk requires the updating of databases containing up-to-date information and data on disaster risks in various parts of the country. Currently, the country does not have a reliable and comprehensive database. International databases are the only sources of information on disaster risks at the national level and are used by various national and UN actors involved in disaster risk reduction. The updating of a database at national level is more than necessary and should be placed under the umbrella of the disaster risk management focal point. It will be a source of information and data for national risk managers. Sex, age and disability disaggregated data is unavailable in the country for now and more technical support is needed. Strengthening the country's disaster preparedness contributes to reducing the vulnerability of disaster-prone communities and building the resilience of those regularly affected by natural disasters In a December 2022 workshop facilitated by UNDRR, Djiboutian government representatives, including the National Sendai Framework Focal Point, the Climate Change Adaptation Focal Point, and officials from the Ministry of Planning and Ministry of Finance, explained the drivers affecting broad-based risk understanding in Djibouti. Those included among others the absence of centralized database for risk, disaster and climate information; absence of regional hazard data; insufficient scientific and sectoral data on hazard exposure, vulnerability and impacts; inadequate coordination among governmental entities; limited national DRR capacities; outdated National DRR Strategy; and, limited access to risk data management, climate and DRR funding.
	b. Describe proposed partnerships and approach for stakeholder engagement in design and in implementation	During the project design phase, over 15 engagements and consultations with national stakeholders (ANM, CERD, RCSD and SEGRC) took place – both virtually and face-to-face. These consultations aimed at identifying national institutions' main priorities and needs that would be addressed by the CREWS Djibouti project. Multiple virtual consultation meetings took place between WMO, ANM and CERD from July – December 2023, and aimed at better understanding national dynamics in EWS, the main hazards that should be addressed by the project, and gaps that ought to be

		bridged in order to ensure that the objectives set by the project are met. A priority analysis was produced by both ANM and CERD as part of this exercise. In November 2023, with the support from the CREWS Secretariat, a technical scoping and validation meeting took place in Djibouti with the participation of WMO, ANM, CERD, RCSD, SOFF, UNDP, and the Civil Protection Agency of Djibouti. The main objectives the mission were to better understand the need and current capacities of both ANM and CERD; to briefly present the CREWS Djibouti project proposal, and how projects are implemented by WMO; to discuss education and training approaches for ANM and CERD that can be incorporated in the project; and to have discussions with the RCSD and better understand their capacity and needs for community-based early warning systems activities under the CREWS Djibouti project being proposed. A key aspect of the technical scoping and validation meeting was the formal request, by ANM and CERD, for the inclusion of additional observational infrastructure under the CREWS Djibouti project – in addition to the SOFF investment being made (one upper air meteorological station and the implementation of WIS 2.0 in a box). According to the national hydrometeorological agencies, the proposed SOFF plan would not be sufficient for the forecasting and development of EWS in the country – as a significant part of the national territory would still not be covered under their observation network. WMO, after consultations with the CREWS Secretariat, is proposing the purchase of three automatic weather stations in order to allow ANM to minimally produce forecasts necessary for EWS in Djibouti. The proposed investment will follow WMO's standards for infrastructure, including data exchange, and sustainability. Engagements with IFRC and the RCSD were also established during the design phase and are expected to continue throughout project implementation. RCSD, with the support from IFRC and under WMO's direct coordination, will develop and implement community-based early warning activities in selected intervention areas in Djibouti. CBEWS interventions in Djibouti will be particularly targeted at attending to the specific needs of women and marginalized groups living in communities impacted by natural hazards – including floods and droughts. Alignment with SOFF's agenda and programme in Djibouti has also been established during the design phase of the CREWS Djibouti project and is expected to be maintained throughout project implementation. During the technical scoping and validation meeting that took place in Djibouti in November 2023, the SOFF peer advisor for Djibouti and the project development team were able to generate coherence between the two proposals being developed, especially in terms of avoiding duplication in the funding of observational infrastructure and implementation of WMO Systems (e.g., WIS) in Djibouti. All capacity building and data management-related activities included in the CREWS Djibouti project take into consideration the planned acquisitions by SOFF for

		the country to better enable and strengthen the technical delivery of hydrometeorological warnings in the country. Furthermore, partnership between the CREWS Djibouti project team, SOFF Secretariat and Peer Advisor (Geosphere Austria) are deemed essential to what it regards to the responsible and sustainable investment of infrastructure in the country – proposed collaboration include: the joint development of technical specifications of infrastructure to be procured to ensure compatibility; and benefit from sustainability efforts done by different initiatives. The design phase of this proposal has also benefited from previous consultations and planning exercises conducted globally between UNDRR, WMO, International Telecommunication Union (ITU) and International Federation of Red Cross and Red Crescent Societies (IFRC) in preparing for the roll out of the EW4All initiative in Djibouti. EW4ALL Activities in Djibouti are currently under preparation but will leverage on the CREWS financing in the country whenever possible, especially in the organization of national workshops and consultations and programmatic development. Likewise, the CREWS investment will benefit and leverage from EW4ALL activities being rolled out in Djibouti. Particular alignment has been, during the project design phase, and will be enforced during the implementation phase with the UN Resident Coordinator Office (UNRCO) and United Nations Country Team (UNCT) in Djibouti.
Project design	a. Project components and activities, including describing what and how people centered, risk informed and gender sensitive approaches will be applied and how people most-at-risk, local actors and organizations will be engaged	CREWS Djibouti's main objective is to strengthen the capacity of national hydrometeorological and disaster management institutions in Djibouti to produce, deliver and disseminate Multi-hazard Early Warning Systems, preparedness, early action and response to hazardous hydrometeorological events that may affect the country. The project objective, outcomes, outputs and activities have been Jointly developed by and validated with national partners and relevant stakeholders. The project is divided in six components : 1. Component 1 – ANM's and CERD's service delivery improved, including the development of long-term service delivery strategies and development plans; 2. Component 2 – Risk Information to guide early warning systems and climate and weather services developed and accessible; 3. Component 3 – Information and communication technology strengthened; 4. Component 4 – Preparedness and response plans with operational procedures that outlines early warning dissemination processed strengthened and accessible; 5. Component 5 – Knowledge products and awareness programmes on early warnings developed;

		6. Component 6 – Gender-sensitive training, capacity building programmes provided. The above-mentioned components and respective outputs are aligned to the new CREWS MEAL Framework (2024). A matrix describing the alignment between the project outcomes/outputs and the new CREWS MEAL Framework is available at Attachment 4 of this project proposal. **Component 1 – ANM's and CERD's service delivery improved, including the development of long-term service delivery strategies and development plans. (**Alignment to Components 1,2 and 3 of the CREWS MEAL Framework**)** Component 1 will aim at strengthening the institutional and human capacities of ANM and CERD to produce and deliver hydrometeorological information and services for a decisive MHEWS. WMO will lead the implementation of this outcome. The project outputs under this Component are: Output 1.1 – Institutional and human capacities of ANM and CERD are strengthened (Alignment to Outputs 1.1; 1.3 and 2.3 of the CREWS MEAL Framework); Output 1.2 – Enhanced capacity by ANM to provide weather and early warning information (Alignment to Output 2.2 of the CREWS MEAL Framework); Output 1.3 – Strengthened co-production between producers and users to develop innovative, accurate, tailormade weather and climate products (including EWS) (Alignment to Outputs 3.1 and 3.2 of the CREWS MEAL Framework); Output 1.4 – Strengthened hydrological monitoring network and forecasting capabilities for effective early warning systems for floods (Alignment to Outputs 1.2; 2.2 of the CREWS MEAL Framework). **Component 2 – Risk Information to guide early warning systems and climate and weather services developed and accessible (Alignment to component 2 of the CREWS MEAL Framework).** Component 2 will aim at strengthening risk knowledge and the capacities of national institutions in Djibouti. UNDRR will lead the implementation of this outcome. There are several challenges and gaps that Djibouti faces in terms of Disaster Risk Reduction (DRR) risk information. These challenges can be categorized into various aspects, including institutional, technical, and socio-economic factors. As an LDC country Djibouti lack sufficient human and financial resources to effectively manage and address disaster risks. This results in inadequate planning,

		coordination, and implementation of DRR measures. Inadequate data collection, analysis, and monitoring systems lead to a lack of comprehensive risk information, making it difficult to identify, assess, and prioritize DRR interventions. Due to this, Djibouti face challenges in establishing and maintaining efficient early warning systems for various hazards, which result in delayed or inaccurate information dissemination. Not only that, but Djibouti also face financial, technical, and human resource limitations in implementing DRR initiatives, which hinder the development and implementation of effective risk information platform. Djibouti faces a scarcity of data related to various hazards, vulnerabilities, and exposures. This makes it difficult to identify, assess, and prioritize risks, as well as to monitor the progress of DRR efforts. Inaccurate, outdated, or inconsistent data lead to misinformed decision-making and ineffective risk reduction strategies. Limited geographic and temporal coverage of data can result in a lack of understanding of the spatial distribution and temporal dynamics of risks, which is essential for targeted interventions. The country lack access to advanced technologies, such as remote sensing, geographic information systems (GIS), and predictive modeling tools, which significantly enhance risk information analysis and decision-making. The absence of standardized methods for risk assessment, mapping, and monitoring lead to inconsistencies in risk information and hinder comparability across different regions and time periods. Addressing these technical challenges in risk information can significantly enhance Djibouti's DRR capacities and contribute to more effective risk reduction strategies. This can be achieved through investments in data collection and management systems, advancements in communication technologies, and the adoption of standardized methodologies and participatory approaches in risk assessment and management. UNDRR will be supporting the disaster risk knowledge component of this proposal keeping in consideration the above major challenges faced by the Government of Djibouti. The project outputs under this Component are: Output 2.1 – Improved access to risk information through enhanced data platforms and stakeholder capacities; Output 2.2 – Strengthened National capacities in Djibouti for disaster risk knowledge. **Component 3 – Information and communication technology strengthened (Alignment with Component 2 of the CREWS MEAL Framework).** Component 3 will aim at reinforcing both ANM and CERD's technical and information technology capacities, with a particular focus on the enhancement of monitoring and observational data

		exchange, and outreach. This component will also include the improvement of ANM's observing capacities for a more efficient forecasting. The project outputs under this Component are: Output 3.1 – Development of ANM's and CERD's technical and community outreach capacities (Alignment to Output 2.2 of the CREWS MEAL Framework); Output 3.2 – Enhancing monitoring and observational data exchange (Alignment to Output 2.2 of the CREWS MEAL Framework); Output 3.3 – Communication of EWS Improved (Alignment to Output 2.3 of the CREWS MEAL Framework); Output 3.4 – Enhancement of basic observing and forecasting infrastructure to ANM (Alignment to Output 2.2 of the CREWS MEAL Framework). **Component 4 – Preparedness and response plans with operational procedures that outlines early warning dissemination processes strengthened and accessible (Alignment to Components 2 and 3 of the CREWS MEAL Framework).** Component 4 will aim at ensuring that warning communication and dissemination reach local communities and vulnerable individuals living in flood and drought-prone regions in Djibouti. A key aspect of this component will be the community-based early warning systems activities developed and implemented by the National Red Crescent Society of Djibouti; and the development of a radio protocol for the improved communication of warnings to nomads living in desertic areas. The project output under this component is: Output 4.1- Ensure warning communication and dissemination systems reach local communities, including seasonal populations and those in remote locations (Alignment to Outputs 2.3, 2.4 and 3.1 of the CREWS MEAL Framework) . **Component 5 – Knowledge products and awareness programmes on early warnings developed (Alignment to Component 2 of the CREWS MEAL Framework).** The aim of Component 5 is to develop knowledge products to increase awareness of MHEWS in Djibouti and to share good practices. An important aspect of this outcome and outputs therein is the showcase of project achievements through videos, photos and support to publications related to project activities and benefits. The latter leveraging from the potential of CERD being also a research institute and a climate center in Djibouti. The project output under this Component is:

		Output 5.1 – Knowledge products and publications developed (Alignment to Output 2.1 of the CREWS MEAL Framework). **Component 6 – Gender-sensitive training, capacity building programmes provided (Alignment to Component 3 of the CREWS MEAL Framework).** The aim of Component 6 is to develop and strengthen gender-focused guidance and training on MHEWS. This will include the roll out of the national inclusive early warning early action checklist for Djibouti, in line with the guidelines developed under the CREWS Pacific SIDS 2.0 project; national and regional training aimed at sensitizing national stakeholders on the specific needs of women and vulnerable groups in EWS and empowering women involved hydrometeorology and disaster risk reduction. The project output under this Component is: Output 6.1: Mainstreaming gender and disability developed (Alignment to Output 3.1 of the CREWS MEAL Framework). The detailed description of the project activities can be found in the Project Log Frame.
	b. Work plan	Throughout the 4-year project cycle, the implementation of each activity will be carried out progressively, step by step, considering the resources, capacity, and priorities of national institutions in Djibouti. Regular monitoring and evaluation will be conducted to ensure the effective and efficient progress of the project. The workplan is annexed to this project proposal.

Organization and operating procedures	a. Institutional framework (Describe the planned project management set up and how all the organizations involved in implementing the project will work together. Give a brief description of each partner/actors key roles by component)	The project will be jointly implemented by WMO and UNDRR supporting ANM, CERD and DRR institutions, in collaboration with other relevant stakeholders at the local and national levels. A project governance mechanism will be set up. Hence, a Project Steering Committee (PSC) will be led by national stakeholders (ANM, CERD, SEGRC), with the chairing of the meeting on a rotational basis, with support from CREWS implementing partners. The PSC will ensure quality of governance, and the effective delivery of project activities on time, on budget and within the expected quality results. The PSC will have an oversight role including: a) Definition of roles, responsibilities and contributions of project stakeholders; b) Review of implementation progress;

		c) Management of project risks; d) Guidance and recommendations including for developing synergies and leveraging opportunities with other projects being developed and implemented in Djibouti. The PSC will provide oversight and directions to the project implementation and meetings will take place either virtually or face to face yearly.
	b. Monitoring and evaluation system	A Monitoring and Evaluation plan is expected to be developed during the first year of the project by an expert who will work with the partners to set measurable beneficiary indicators and deliver a framework upon which the project performance can be predicted, measured and improved aligned with the CREWS MEAL framework. The project's logical framework (Attachment 3) will be used to monitor progress and achievements against the indicators. The implementing partners will jointly conduct an internal bi-annual review of the progress, highlights, and risks and take corrective actions, as required. These bi-annual reviews will be in accordance with CREWS Monitoring and Evaluation System and the outcomes will be recorded within official reports published by the CREWS Secretariat. In addition to the bi-annual reviews, formal project reviews will take place including an external evaluation, conducted mid-way through the project timeline, and at the end of the project to examine the projects performance and provide guidance as necessary. These evaluations will include review of outputs, risks and progress achieved.
Project viability and sustainability	a. Main identified risks	**Political instability (medium):** While stable as a country, Djibouti is located within a politically unstable region. Instability in the Greater Horn of Africa and Gulf of Aden can potentially pose risks to Djibouti and to project implementation. Mitigation measures: Political situation in the region will be closely monitored. Early discussion on potential impacts on project implementation and mitigation measures will be carried on if the political situation in country deteriorates. The project will also work closely with regional entities, which could provide backup functions to provide services for national entities in case the situation in Djibouti leads to a halt in project implementation. **Environmental risks (medium):** Hazards such as severe weather, floods and drought have the potential to cause delays in project implementation. Mitigation measures: To mitigate this risk, flexible adjustment of the sequence of activities as well as regular project reviews are required.

		As the project mainly provides technical assistance no large civil works are anticipated and hence, will not generate any negative environmental impact. **Commitment from the country (low):** The risk of lack of commitment, by national institutions and authorities in Djibouti, in the implementation of this project is considered low. However, the complex structure of the various institutions and authorities involved in the project along with the potential administrative complications may compromise implementation. Mitigation measures: The Implementing Partners will establish and maintain strong communication lines with national institutions and authorities and the different stakeholders through national networks/offices. This CREWS project will be realized through the nomination of focal points from key national hydrometeorological and DRR institutions, who will create a systematic communication channel with the stakeholders to ensure that they are informed of needs, developments, and progress. **Human resources / capacity risks (medium):** The human and technical capacity of the national hydrometeorological and disaster management institutions and authorities to support the project activities on top of their regular activities is a risk that can impact the project outputs. While some of the training requirements of the staff can be supported through the project, the issue of scarce human resources may not be fully addressed through the project, though efforts will be made to provide guidance to the Institutions on a long-term hiring strategy. Mitigation measures: Through close collaboration, the partners will provide support and offer administrative guidance on WMO and UNDRR-related procedures on contracts, procurement and budgeting to the NMHSs and National Disaster Management Offices (NDMOs) to facilitate the management of any extra demand brought upon by the project.
	b. Critical assumptions	The success of the project hinges on the following critical assumptions: • Strong political commitment from the national government of Djibouti and its institutions. • Cooperation among/between and support from the WMO network of NMHSs, Regional Centres, and partners. • Joint work between WMO and UNDRR as implementing partners. • An increase in public awareness to hydro-meteorological

		hazards and a desire to build resilience. • Agreement among partners and stakeholders on their complementary roles within the four components of people-centered EWSs (Disaster risk knowledge; Detection, monitoring, analysis and forecasting of the hazards and possible consequences; Warning dissemination and communication; Preparedness and response capabilities; and the early warning – early action, which focuses on reducing risks, especially vulnerabilities and minimizing disaster impacts). • Agreement among the stakeholders on the objectives along with a clear understanding of the initiatives implemented.
	c. Judgment on the project sustainability	The project will focus on, among others, institutional capacity building and producing tangible outputs with convincing narratives so that decision makers would be aware of the tangible benefits of hydrometeorology and early warning services. The sustainability of the outcomes achieved through this project, will be ensured through: (i) Transferring and ensuring country ownership of assets and capacities developed during the project development and execution through active engagement of the key stakeholders. (ii) Provision of support of the development of national strategic plans, frameworks for weather, water, and climate services as well as a nation-wide protocol for EWS. This will strengthen the role and mandate of ANM and CERD, and DRR institutions in the long-term. (iii) Alignment with and leverage ongoing and planned initiatives in the country, including but not limited to SOFF, GCF and WB investments. (iv) The project aims to provide guidance to and improve visibility of the project beneficiaries (national institutions), to promote the relevant initiatives and support with mobilization of additional resources (financial, human, technological) from National Governments and other donors to sustain the benefits of the project outcomes. (v) The project's PSC and WMO Regional Association I – Africa will support with putting in place the appropriate mechanisms for sustaining the progress made in the project. In addition, a sustainability plan driven by the PSC will be developed over the lifetime of the project. This plan will not only focus on sustaining the tools and the hardware but also address ways of sustaining knowledge and capacity in the country.

Attachment 1: Budget Breakdown (USD)

Component 1 - ANM's and CERD's service delivery improved, including the development of long-term service delivery strategies and development plans					
Output		**Activities**	**Leading (in bold) and involved partners**	**Budget per Implementing Partner (USD)**	
				WMO	UNDRR
1.1 Institutional and human capacity of ANM and CERD are strengthened	1.1.1	Review ANM's current National Strategic Plan for 2021-2025 and develop action plan for years 2024 and 2025	**ANM**	16,000.00	
	1.1.2	Develop National Strategic Plan and Framework for Weather, Water and Climate Services, and related implementation plan for ANM for the period 2026-2030	**ANM**	25,000.00	
	1.1.3	Development of a national communication protocol on EWS	**ANM CERD DRM Agency**	30,000.00	
	1.1.4	Education and training of staff from ANM and CERD for better operational and service delivery capacity.	**ANM CERD**	100,000.00	
1.2 Enhanced capacity by ANM to provide weather and early warning information	1.2.1	Improving the observational and forecasting capacity of ANM to generate, customize and disseminate weather and early warning services	**ANM**	60,000.00	

1.3 Strengthened co-production between producers and users to develop innovative, accurate, tailormade weather and climate products (including EWS)	1.3.1	Establish the first National Climate Outlook Forum (NCOF) for Djibouti	**ANM**	30,000.00	
	1.3.2	Socio-economic benefits analysis of hydrometeorological services to priority sector(s)	**ANM**	30,000.00	
1.4 Strenghthened hydrological monitoring network and forecasting capabilities	1.4.1	Develop hydrological status and outlook system and impact-based forecasts	**CERD** ANM	300,000.00	
Component 2 - Risk Information to guide early warning systems and climate and weather services developed and accessible					
Output		**Activities**	**Leading (in bold) and involved partners**	**Budget per Implementing Partner (USD)**	
				WMO	UNDRR

2.1 Improved access to risk information through enhanced data platforms and stakeholder capacities	2.1.1	Conduct EW4All Pillar 1 workshop on the use of risk knowledge for early-warning systems to scale up risk information in Djibouti Conduct gap analysis to identify the minimum capability required for producing and using quality, timely, and contextually relevant risk information to identify key needs and priorities for scaling up national risk knowledge for EWS in Djibouti. This activity is designed to review data gaps, understand national capacities and the coordination/collaboration platform whereby risk knowledge is generated and used for early warning systems. Compile national risk knowledge enhancement plans (within context of national EWS roadmaps), based on capability gap analysis to agree on steps and process to develop, review or further implement, a national EWS roadmap, based on insights from the gap analysis, that delineates actionable steps to address Djibouti national priorities and bolster early warning systems. Provide support to key stakeholders	Ministry of Interior and Decentralization Executive Secretariat of Disaster Management, Ministry of Interior		175,000

		with the development of processes and institutional frameworks for integrating risk information into early warning systems. conduct detailed mapping of risk knowledge stakeholders and data owners/producers coupled with the fortification or establishment of risk knowledge for Djibouti coordination mechanisms for risk information and its application in EWS. Provide support towards strengthening governance arrangements to ensure inclusive and participatory decision-making in risk knowledge management, including the participation of most at risk communities			
	2.1.2	Build and enhance national, sub-national, and local capacity for developing and strengthening risk information datasets, including trainings on data collection, processing, management, analysis, visualisation, etc.) to achieve minimum core capabilities on risk knowledge. Provide support with and scale up implementation of quality assurance mechanisms to ensure the accuracy and relevance of	Ministry of Interior and Decentralization Executive Secretariat of Disaster Management, Ministry of Interior		190,000

		risk information produced			
2.2 Strengthened National capacities in Djibouti for disaster risk knowledge	2.2.1	- Build national capacity for developing, using and maintaining Disaster Loss Databases, in line with Sendai framework reporting requirements and new generation DLD / DesInventar-Sendai Aligning the new tracking system for hazardous events and disaster loss and damages to support the EW4ALL initiative in Djibouti.	Ministry of Interior and Decentralization Executive Secretariat of Disaster Management, Ministry of Interior		150,000

	2.2.2	- Support the coordination of the National DRR platform and National coordination mechanism for EW4All in Djibouti. - Provide technical and advisory support to national institutions to: 1) Establish nationally owned and managed interoperable risk data sharing / access platform that provide standardized and up-to-date risk information, in line with national data sharing principles. 2) To incorporate gender dimensions of disaster risk to inform decision-making within government and among stakeholders - Developing secure databases that includes sex, age and disability disaggregated data and national disability data and providing resources online for vulnerability and data management for vulnerable communities in Djibouti. - Develop national SOPs, guidelines and frameworks for risk information access, inter-operability and communication. -improve access to risk information	Ministry of Interior and Decentralization Executive Secretariat of Disaster Management, Ministry of Interior		341,000

		systems and data sharing platforms. - To monitor and report progress on Sendai Framework Target G - Strengthen National Climate Outlook Forums (NCOFs) with linkages to Regional Climate Outlook Forums and other relevant platforms - To mainstream gender and disability at all levels by creating credibility and trust between the scientists and the local communities, along with the responding agencies/organizations. Activities can be led by the designated gender and disability focal points in Djibouti.			
Component 3 - Information and communication technology strenghtened					
Output		**Activities**	**Leading (in bold) and involved partners**	**Budget per Implementing Partner**	
				WMO	UNDRR
3.1 Development of ANM's and CERD's technical and community outreach capacities	3.1.1	Website upgrade for ANM	**ANM**	30,000	

	3.1.2	Purchase of ICT equipment for ANM and CERD	**ANM CERD**	60,000	
3.2 Enhancing monitoring and observational data exchange	3.2.1	Support Data Rescue at ANM and CERD, and renewal of ANM archive room.	**ANM** CERD	75,000	
	3.2.2	Strengthen data management (both CERD and ANM) through integrated approach	**ANM CERD**	130,000	
	3.2.3	Technical support for WIGOS implementation	**ANM** CERD	70,000	

3.3 Communication of EWS Improved	3.3.1	Common Alert Protocol (CAP) implementation and training, and introduction to IBF	**ANM**	30,000	
3.4 Enhancement of basic observing and forecasting infrastructure to ANM	3.4.1	Procurement and deployment of automatic weather stations (AWS) to ANM	**ANM**	200,000	
	3.4.2	Procurement, rehabilitation and deployment of PUMA workstations to ANM	**ANM**	30,000	
	3.4.3	Development of guidance and plan on sustainability of infrastructure investments	**ANM**	10,000	
Component 4 - Preparedness and response plans with operational procedures that outlines early warning dissemination processed strengthened and accessible					
Output		**Activities**	**Leading (in bold) and involved partners**	**Budget per Implementing Partner**	
				WMO	UNDRR
Output 4.1 Ensure warning communication and dissemination systems reach local communities, including seasonal populations and those in remote locations	4.1.1	CBEWS implemented and preparedness and response plans developed in flood-prone areas in selected regions in Djibouti.	**RCSD** ANM CERD IFRC	170,000	
	4.1.2	Early warning dissemination reinforced through mobile and radio networks	**ANM CERD DRM Agency**	20,000	
Component 5 - Knowledge products and awareness programmes on early warnings developed					
Output		**Activities**	**Leading (in bold) and involved partners**	**Budget per Implementing Partner**	
				WMO	UNDRR

5.1 Knowledge products and publications developed	5.1.1	Develop and design communication and knowledge products to increase awareness of MHEWS and share good practices	**ANM CERD DRM Agency**	15,000	

Component 6 - Gender-sensitive training, capacity building programmes provided					
Output		**Activities**	**Leading (in bold) and involved partners**	**Budget per Implementing Partner**	
				WMO	UNDRR
6.1 Mainstreaming gender and disability	6.1.1	Development and provision of national trainings targeted at women in EWS	**ANM CERD DRM Agency**	20,000	
	6.1.2	National roll out of the Inclusive early warning early action checklist and development of an action plan for Djibouti	**ANM CERD DRM Agency**	30,000	

Project Management Costs		
Costs	**Budget per Implementing Partner**	
	WMO	UNDRR
Project Management, Technical Advisory, Communications and Translations	630,000	178,000
Monitoring & Evaluation	50,000	
Closing and Launch Events	50,000	20,000
Programme Support Cost	287,430	137,020
Total	2,498,430	1,191,020

Attachment 2: Timeline for implementation (workplan)

See attached.

Attachment 3: Logical framework

See Attached.

Attachment 4: Alignment with the CREWS MEAL Framework

CREWS MEAL Outcomes	Outcome 1.National and local multi- hazard early warning systems prioritized and funded			Outcome 2. Improved early waning service delivery and accessibility by national and regional institutions				Outcome 3. Early warning programmes are driven by people- centered and gender responsive principles and promote private sector engagement	
CREWS MEAL Outputs / Project Outputs	Output 1.1. A country and/or region has developed or strengthened legislative and/or institutional frameworks to support and sustain multi- hazard early warning systems	Output 1.2. Multi-hazard needs, gaps and priority assessments, analyses and related investment plans for early warning systems in a country or region are driven by CREWS financing	Output 1.3. Partnerships and cooperation frameworks developed for financing and scaling up support to multi-hazard early warning systems	Output 2.1 Risk information and tools generated by countries to enable the delivery of impact- based early warnings	Output 2.2. Monitoring, analysis and forecasting of hazards that threaten the country/region are improved and sustained by the countries	Output 2.3 Warnings are communicated by the countries based on common alerting protocols under agreed standard operational procedures (SOPs)	Output 2.4 Warnings are received, understood and acted upon based on co-produced preparedness and response plans by the countries	Output 3.1 People of different backgrounds, gender, youth, older persons, persons with disability, poor, marginalized, displaced, and non- native, as well as related institutions have co- produced climate and weather information products tailored to their needs	Output 3.2 Private sector is engaged to foster innovation and sustainability in delivery of early warning services
Output 1.1 Institutional and human capacity of ANM and CERD are strengthened	✓		✓			✓			
Output 1.2 Enhanced capacity by ANM to provide weather and early warning information					✓				
Output 1.3 Strengthened co-production between producers and users to develop innovative, accurate, tailormade weather and climate products (including EWS)								✓	✓
Output 1.4 – Strengthened hydrological monitoring network and forecasting capabilities for effective early warning systems for floods		✓			✓				

	Output 2.1 Strengthening Disaster Risk Knowledge				✓					
	Output 2.2 Strengthened National capacities in Djibouti for disaster risk knowledge				✓					
	Output 3.1 Development of ANM's and CERD's technical and community outreach capacities					✓				
	Output 3.2 Enhancing monitoring and observational data exchange					✓				
	Output 3.3 Communication of EWS Improved						✓			
	Output 3.4 Enhancement of basic observing and forecasting infrastructure to ANM					✓				
	Output 4.1 Ensure warning communication and dissemination systems reach local communities, including seasonal populations and those in remote locations						✓	✓	✓	
	Output 5.1 Knowledge products and publications developed				✓					
	Output 6.1 Mainstreaming gender and disability								✓	

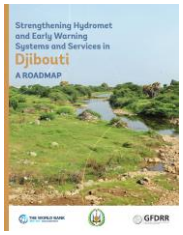
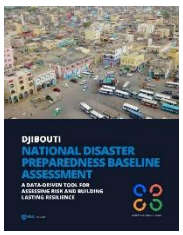
Attachment 5: References

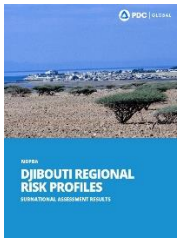
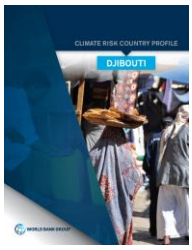
Acronyms

ANM	National Meteorological Agency/Agence Nationale de la Météorologie
AFDB	African Development Bank
CDMS	Climate Database Management System
CERD	Center for Scientific Studies and Research of Djibouti / Centre d'Etudes Scientifiques et de Recherche de Djibouti
CHE	Catalogue of Hazardous Events
ClimSA	Intra-ACP Climate Services and related Applications Programme
CONFER	Co-production of Climate Services in East Africa
CREWS	Climate Risk and Early Warning Systems
DEED	Department of the Environment and Sustainable Development / Direction de l'Environnement et du Développement Durable
DHR	Directorate of Rural Hydraulics / Direction de l'Hydraulique Rurale
DNPC	National Directorate for Civil Protection / Direction Nationale de la Protection Civile
DRM	Disaster Risk Management
EAC	East African Community
EU	European Union
EW4All	Early Warnings for All
EWS	Early Warning Systems
GCF	The Green Climate Fund
ICPAC	IGAD Climate Prediction and Applications
IFRC	International Federation of Red Cross and Red Crescent Societies
ITU	International Telecommunication Union
KMD	Kenyan Meteorological Department
MHEWS	Multi-Hazard Early Warning Systems
NAP	National Adaptation Plans
NDC	Nationally Determined Contributions of the Republic of Djibouti
NDMO	National Disaster Management Office
NMHSs	National Meteorological and Hydrological Services

NWP	Numerical Weather Prediction
PDC	Pacific Disaster Center
RCC	Regional Climate Centre
RCSD	The National Red Crescent Society of Djibouti
RIC	Regional Instrument Centre
RSMC	Regional Specialized Meteorological Centre
RWC	Regional WIGOS Centre
SAWIDRA	Satellite and Weather Information for Disaster Resilience in Africa
SEGRC	Executive Secretariat for Disaster Risk Management / Secrétariat exécutif pour la Gestion des Risques et des Catastrophes
SOFF	The Systematic Observations Financing Facility
SWFP	Severe Weather Forecasting Programme
TMA	Tanzania Meteorological Authority
UNCT	United Nations Country Team
UNDP	The United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNDRR ROAS	UNDRR Regional Office for Arab States
UNRCO	UN Resident Coordinator Office
WB	World Bank
WISER	Weather and Climate Information Services for Africa
WMO	World Meteorological Organization

Reference Materials

	**Roadmap for Strengthening Hydromet and Early Warning Systems and Services in Djibouti, World Bank, 2022.**
	**National Disaster Preparedness Baseline Assessment: Djibouti, Pacific Disaster Center, 2022.** NDPBA_DJIBOUTI_Report_2023.pdf (pdc.org)

	**NDPBA Subnational Assessment Results: Djibouti Regional Risk Profiles, Pacific Disaster Center, 2022.** DJI-NDPBA-Subnational-Profiles-Merged-version2.pdf (pdc.org)
	**Climate Risk Country Profile: Djibouti, World Bank, 2021.** 15722-WB_Djibouti Country Profile-WEB.pdf (worldbank.org)