

Template for CREWS Action Presentation Note

Action Title	<i>Sierra Leone - Strengthening Emergency and Preparedness Response</i>
Country	Sierra Leone
Partner Country Entity / Entities	Sierra Leone Meteorological Agency (SLMet): Ibrahim S Kamara, Director General, sinneh71@gmail.com, National Water Resources Management Agency (NWRMA): Ing Pierre Palmer- Director General, ppalmer@nwrma.gov.sl, and National Disaster Management Agency (NDMA): John Vandi Rogers, Director General, jvrogers2000@gmail.com
Implementing Partner (if submission by Implementing Partner)	World Bank Contact: Francis Nkoka Senior Disaster Risk Management Specialist fnkoka@worldbank.org
Implementing Partner Requested (if submission by Partner Country)	<p><i>Select at least 1:</i></p> <p><input checked="" type="checkbox"/> World Bank/GFDRR</p> <p><input type="checkbox"/> WMO</p> <p><input type="checkbox"/> UNDRR</p> <p><input type="checkbox"/> No preference</p> <p><i>[Please note that the requested Implementing Partner is not guaranteed; the Secretariat will review the nature of the Action and determine the most appropriate Implementing Partner, and the Implementing Partner will also need to confirm interest and availability to proceed with the Action Presentation Note in partnership with the Partner Country]</i></p>
Action Type	<p><i>Select at least 1:</i></p> <p><input checked="" type="checkbox"/> Continued Assistance</p> <p><input type="checkbox"/> Analyses and Assessments</p> <p><input checked="" type="checkbox"/> Advisory Services</p> <p><input type="checkbox"/> Support to Project Preparation</p>
Early Warning System Element(s) Supported	<p><i>Select at least 1:</i></p> <p><input checked="" type="checkbox"/> Monitoring, detection, analysis and forecasting of hydro-meteorological hazards providing lead-times for action.</p> <p><input checked="" type="checkbox"/> Dissemination of timely and authoritative warnings</p> <p><input checked="" type="checkbox"/> Preparedness and response plans triggered by warnings and weather and climate predictions.</p> <p><input checked="" type="checkbox"/> Disaster risk knowledge based on the systematic collection of data and disaster risk assessment.</p>
Contributions to CREWS Programming Principles and	<p>CREWS Programming Principles addressed:</p> <p><i>Select all relevant:</i></p> <p><input checked="" type="checkbox"/> People-centered</p> <p><input checked="" type="checkbox"/> Gender-responsive</p>

<p>Results Framework</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Promotes Coherence <input checked="" type="checkbox"/> Leverage <input checked="" type="checkbox"/> Disability-inclusive <p>CREWS Results Framework Outputs to which the Action is expected to contribute to:</p> <p><i>Select at least one:</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> A country and/or region has developed or strengthened legislative and/or institutional frameworks to support and sustain multi-hazard early warning systems. <input type="checkbox"/> 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. <input type="checkbox"/> Partnerships and cooperation frameworks developed for financing and scaling up support to multi-hazard early warning systems. <input checked="" type="checkbox"/> Risk information and tools generated by countries to enable the delivery of impact-based early warnings. <input type="checkbox"/> Monitoring, analysis and forecasting of hazards that threaten the country/region are improved and sustained by the countries. <input type="checkbox"/> Warnings are communicated by the countries based on common alerting protocols under agreed standard operational procedures (SOPs) <input checked="" type="checkbox"/> Warnings are received, understood and acted upon based on co-produced preparedness and response plans by the countries. <ul style="list-style-type: none"> <input checked="" type="checkbox"/> 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. <input type="checkbox"/> Private sector is engaged to foster innovation and sustainability in delivery of early warning services. <p>CREWS Programme Indicators to which the Action is expected to contribute to:</p> <p><i>Select at least one:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Loss of life <input checked="" type="checkbox"/> Forecasting and warning capacity <input checked="" type="checkbox"/> Access to early warning <input type="checkbox"/> Use of risk information <input checked="" type="checkbox"/> Capacity to disseminate warnings. <input checked="" type="checkbox"/> Capacity to prepare for and respond to warnings.
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<p>Specific Action and Objectives</p>	<p>Sierra Leone faces escalating climate risks, with frequent floods, landslides, and storms intensified by rapid urbanization and environmental degradation. The 2023–2024 CREWS “Jump-Start” initiative established critical foundations, improving policies, coordination, and forecasting capacities. However, gaps remain in observation networks, real-time data integration, forecasting accuracy, and last-mile dissemination. The proposed CREWS interventions will build on the pilots done under the 2023–2024 CREWS “Jump-Start” SL grant and scale up to institutionalize and strengthen national early warning systems, expand community-level alert coverage, and enhance technical capacity across key agencies. This continued support will significantly improve preparedness, reduce disaster losses, and build long-term climate resilience nationwide.</p> <p>The grant objective is to reduce vulnerability to hydro-meteorological hazards by strengthening national preparedness, response capability, and institutional resilience. The primary objectives are to:</p> <ul style="list-style-type: none"> • Increase accuracy, timeliness, and accessibility of weather and flood warnings. • Improve coordinated decision-making among agencies responsible for risk monitoring, disaster response, and water management. • Ensure communities, especially those in vulnerable urban and peri-urban settlements, receive actionable information to guide early action. • Sustain institutional performance through improved technical capacity, reduced training gaps, and stronger operational systems. <p>Specific Actions.</p> <p><u>Activity 1: Expanding Early Warning System Coverage, Reliability, and Last-Mile Reach.</u></p> <p>The initial grant successfully mapped the information ecosystem for early warning dissemination in Freetown, highlighting key bottlenecks in data flow, interpretation, and delivery. While EWS coverage has expanded under CREWS and RUSLP, it remains uneven, particularly beyond urban areas. Persistent gaps include last-mile connectivity, multi-hazard integration, sustainability, and the consistency of warning delivery. This component will focus on scaling and institutionalizing early warning dissemination to ensure consistent access to timely information nationwide.</p> <p><u>Activity 2: Strengthen Flood Forecasting and Guidance for Higher Accuracy and Impact</u></p> <p>The initial grant piloted a rainfall-based flood forecasting model for the Greater Freetown area, relying primarily on global datasets and WRF-driven outputs. While this model demonstrated value, accuracy and localization remain constrained. This activity will advance flood risk prediction, transitioning from rainfall-based alerts to impact-based guidance, to strengthen the reliability of the current forecasting system.</p>
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	<p><u>Activity 3: Establish National Flood Risk Management Framework and Coordination Mechanisms</u></p> <p>The initial grant supported the creation of the multi-agency Flood Task Force, which is now operational but lacks a formal legal basis and sustained financing to perform its coordination mandate effectively. Flood risk management remains fragmented, and institutional roles still overlap across forecasting, monitoring, preparedness, and response.</p> <p><u>Activity 4: Strengthen Institutional Capacity for Hydromet and Disaster Risk Management Agencies</u></p> <p>Despite progress under CREWS and RUSLP, significant capacity gaps remain within SLMet, NWRMA, and NDMA. Staff attrition is high, technical skills vary widely, and operational standards are inconsistent. The first CREWS grant developed capacity-building plans identifying both technical and non-technical skill needs, but implementation remains limited.</p>
<p>Need and Rationale</p>	<p>Despite meaningful progress under the initial CREWS grant—which mapped early warning dissemination pathways and piloted a flood forecasting model—coverage, accuracy, and last-mile reach remain uneven across Sierra Leone. Many high-risk communities, especially outside urban centers, still receive late, inconsistent, or inaccessible warnings. Persistent challenges include weak multi-hazard integration, fragmented dissemination channels, limited local capacity for action, and inadequate system sustainability. These gaps threaten the effectiveness of early warning systems and reduce public trust in alerts. The proposed grant builds directly on CREWS-funded insights and systems, enabling fully coordinated, predictable, and community-responsive early warning and early action systems nationwide.</p> <p>The proposed actions will specifically:</p> <ul style="list-style-type: none"> • Directly build on CREWS achievements by transitioning from pilot efforts to institutionalized, scalable systems. • Expand dissemination channels (SMS, IVR, radio, sirens, local authorities, apps, and social media) ensure that alerts reach diverse risk groups. • Institutionalize SOPs developed under the initial grant and enhance community-level structures, such as CDMCs, will translate alerts into timely and actionable responses—closing the warning-to-response gap. • Improve flood forecasting accuracy responds to limitations identified during the first phase. • Upgrade modelling, localized calibration, and integration of hydromet and geospatial datasets from RUSLP will shift forecasts from rainfall signals to true impact-based guidance. • Enhance real-time collaboration across SLMet, NDMA, and NWRMA will enable more targeted and reliable advisories.

	<p>Furthermore, establishing a National Flood Risk Management Framework will address fragmented institutional roles by defining mandates, legal authority, and accountability mechanisms. Sustained capacity development, certification-based training, and retention strategies will ensure continuity of technical skills and operational standards.</p>
<p>Alignment</p>	<p>The Government of Sierra Leone has formally requested CREWS support under the Accelerated Support Window (ASW), building on the progress and lessons from the initial CREWS grant and the RUSLP project. This request follows the 2023 national information ecosystem assessment, which confirmed strong political will for risk-informed decision-making but highlighted persistent technical, institutional, and operational gaps, especially in early warning dissemination, flood forecasting accuracy, and last-mile engagement.</p> <p>The requested action strongly aligns with ongoing projects, national policies, and international commitments aimed at strengthening climate resilience and disaster preparedness in Sierra Leone. It directly complements:</p> <ol style="list-style-type: none"> 1. World Bank Resilient Urban Sierra Leone Project (P1680608) – enhancing early warning systems. 2. World Bank – Sierra Leone First Macro Stability and Resilience DPO with a Catastrophe Deferred Drawdown Option (P503960) – enhanced EP&R Response planning and access to improved early warning system. 3. Complementary to UNDP/WFP community preparedness programs, and the West Africa Food System Resilience Program (FSRP). 4. Partnerships with regional institutions (GMet Ghana, University of Leeds UK) for specialized training and knowledge exchange 5. UNDP Climate Information and Early Warning Systems Project – capacity development for climate data management. 6. African Development Bank’s Climate Resilience Program – promoting infrastructure resilience and institutional reform. 7. ECOWAS Regional Hydromet Programme – supporting cross-border data sharing and interoperability. <p>The action reinforces major policy frameworks, including the National Adaptation Plan (NAP), Disaster Management Policy (2022), and National Climate Change Policy, which all emphasize improved forecasting, early warning dissemination, and multi-sector coordination. It also supports implementation of the Nationally Determined Contribution (NDC), particularly its commitments to strengthen climate information services and reduce disaster-related loss of life, livelihoods, and assets.</p> <p>At institutional level, the action builds on the operationalization of the Flood Risk Task Force established under CREWS Phase I. By advancing a legal and financing structure for this entity, it deepens earlier achievements and ensures country ownership and sustainability.</p>
<p>Timeframe</p>	<p>12 months</p>
<p>Action Cost (To be completed by</p>	<p>US\$ 250,000</p>

Implementing Partner)	
Attachments	<p><i>[Country Endorsement Letter or similar¹ if submission by Implementing Partner] – team is awaiting CMU endorsement; see attach request from client.</i></p> <p><i>[Detailed Activity List to be provided by Implementing Partner]</i></p> <p><i>[Detailed Budget to be provided by Implementing Partner]</i></p>

Detailed Activity List *[Please add or remove activity lines as necessary]*

Task	Months											
	1	2	3	4	5	6	7	8	9	10	11	12
Activity 1: Expanding Early Warning System Coverage, Reliability, and Last-Mile Reach. This component will focus on scaling and institutionalizing early warning dissemination to ensure consistent access to timely information nationwide. Key activities and outputs will include:												
1. Developing, standardizing, and institutionalizing multi-agency SOPs for warning generation, validation, dissemination, and feedback loops.												
2. Strengthening multi-channel dissemination systems (SMS, IVR, radio, sirens, community leaders, apps, and social media) to reach urban, peri-urban, rural, and informal settlements.												
3. Institutionalizing, equipping, and operationalizing Community Disaster Management Committees (CDMCs) to translate warnings into local response actions												
4. Establishing sustainability models, including maintenance and financing mechanisms for EWS infrastructure.												
Activity 2: Strengthening Flood Forecasting and Guidance for Higher Accuracy and Impact. This component will advance flood risk prediction, transitioning from rainfall-based alerts to impact-based guidance.												

¹ This can include existing Letters or Frameworks in place between the Implementing Partner and Partner Country or Countries in the event that the scope of engagement includes the specific early warning system Action being requested. For Regional Action requests, the Endorsement Letter or similar existing Letter or Framework can originate from relevant regional institutions.

<p>1. Upgraded WRF-based models using higher-resolution datasets and localized calibration.</p> <p>2. Refining rainfall thresholds to differentiate between varying severity levels in complex urban flood contexts.</p>													
<p>3. Integrating hydrological, geospatial, and sensor-based data generated under RUSLP into a unified forecasting platform.</p>													
<p>4. Establishing structured real-time collaboration between SLMet, NDMA, and NWRMA for forecast interpretation and targeted advisories.</p>													
<p>Activity 3: Establish National Flood Risk Management Framework and Coordination Mechanisms. This activity will strengthen the operationalization of the Flood Risk Task Force by establishing a National Flood risk management framework to enhance coordination.</p>													
<p>1. TA to support operationalization of a National Flood Risk Management Framework. This will include support towards establishing a legal mandate and sustainable financing model for the Flood Task Force.</p>													
<p>2. Report defining institutional roles, accountability mechanisms, and standardized data-sharing arrangements for the Flood Risk Task Force. (1)</p>													
<p>Activity 4: Strengthen Institutional Capacity for Hydromet and Disaster Risk Management Agencies. This will support key sustainability gaps in human and institutional capacity through the following activities.</p>													
<p>1. Specialized technical training (forecasting, hydrology, modelling, equipment maintenance, GIS/remote sensing). (target 50 people)</p>													
<p>2. 2 capacity building workshops on enhancing operational skills for risk communication, stakeholder engagement, incident reporting, and outreach.</p>													
<p>3. Joint drills, simulation exercises, and multi-agency training to reinforce seamless warning-to-response operations. (target 3 exercises)</p>													

