Annex 1 – Template for CREWS Action Presentation Note

Action Title	Strengthening Climate Risk Information and Downscaled Projections for Rwanda's Early Warning and National Adaptation Planning
Country(ies)	Republic of Rwanda
Partner Country Entity / Entities	**Rwanda Meteorology Agency (METEO RWANDA)**
Implementing Partner *(if submission by Implementin*	*[Implementing partner, including main point(s) of contact and contact details]*
Implementing Partner Requested *(if submission by Partner Country)*	*Select at least 1:* ☐ World Bank/GFDRR ☒ WMO ☐ UNDRR ☐ No preference *[Please note that the requested Implementing Partner is not guaranteed;*
Action Type	*Select at least 1:* ☐ Continued Assistance ☒ Analyses and Assessments ☒ Advisory Services ☒ *Support to Project Preparation*
Early Warning System Element(s) Supported	*Select at least 1:* ☒ Monitoring, detection, analysis and forecasting of hydro-meteorological hazards providing lead-times for action. ☐ Dissemination of timely and authoritative warnings ☐ Preparedness and response plans triggered by warnings and weather and climate predictions. ☒ Disaster risk knowledge based on the systematic collection of data and disaster risk assessment. *[Optional: provide additional information as relevant]* Supports Pillars 3 & 4 through enhanced decision-ready risk products

Contributions to CREWS Programming Principles and Results Framework	**CREWS Programming Principles addressed:** *Select all relevant:* ☒ People-centered ☒ Gender-responsive ☒ Promotes Coherence ☒ Leverage **CREWS Results Framework Outputs to which the Action is expected to contribute to:** *Select at least one:* ☐ A country and/or region has developed or strengthened legislative and/or institutional frameworks to support and sustain multi-hazard early warning systems. ☐ 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. ☐ Partnerships and cooperation frameworks developed for financing and scaling up support to multi-hazard early warning systems. ☒ Risk information and tools generated by countries to enable the delivery of impact-based early warnings. ☒ Monitoring, analysis and forecasting of hazards that threaten the country/region are improved and sustained by the countries. ☐ Warnings are communicated by the countries based on common alerting protocols under agreed standard operational procedures (SOPs) ☐ Warnings are received, understood and acted upon based on co-produced preparedness and response plans by the countries. ☒ People of different backgrounds, gender, youth, older persons, people 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. ☐ Private sector is engaged to foster innovation and sustainability in delivery of early warning services. **CREWS Programme Indicators to which the Action is expected to contribute to:** *Select at least one:*

	☐ Loss of life ☒ Forecasting and warning capacity ☒ Access to early warning ☒ Use of risk information ☐ Capacity to disseminate warnings. ☒ Capacity to prepare for and respond to warnings. *[Optional: provide additional information as relevant]*
Specific Action and Objectives	*[Max. 250 words describing the requested Action and the Objectives]* Rwanda faces increasing climate risks—including more frequent extreme rainfall, intensified floods, prolonged droughts, and rising temperatures—documented through national downscaled analyses. Yet national institutions still lack the capacity to routinely update, interpret, and mobilize projections for early warning and adaptation planning, as highlighted in the NAP process. This proposal aims to strengthen Rwanda's climate risk information system by: • Producing updated national downscaled climate projections (temperature, rainfall, extremes) using WMO-recommended methodologies, building on the NAP's initial datasets. • Developing climate-risk narratives and maps for key sectors and catchments, applying the Climate-in-Context and CLEAR methodologies to support food security, water, land, and DRR planning. • Building institutional capacity through training for METEO RWANDA, REMA, and the NAP TWG on projection generation, quality control, bias correction, validation, and interpretation. • Supporting the preparation of climate-risk inputs for the next NAP cycle, sector adaptation strategies, and catchment-level adaptation plans. • Develop climate change fact sheet for each climatological zone to support policy-making • Train public–private financial institutions to use climate projections for risk pricing and planning

Need and Rationale	*[Max. 250 words articulating why the Action is needed and how it contributes to the country's early warning system efforts; if Cont. Ass., how it builds on CREWS Project]* Rwanda's NAP and associated studies identify critical gaps in national technical capacity to generate downscaled climate projections, interpret extreme event indicators, and integrate medium- to long-term climate risk information into sectoral planning. Extreme rainfall, drought frequency, and warming trends are already negatively affecting agriculture, water resources, infrastructure, and livelihoods. Although initial projections were developed during the NAP process, they are not yet institutionalized or regularly updated. Stakeholders highlighted the need for **standardized, decision-ready climate projections and climate-risk products** at national, catchment, climatological zones, and district levels to inform policies, investment decisions, and early warning services. The proposed actions will address these gaps by: • Supporting METEO RWANDA to update and operationalize downscaled projections; • Building capacity to analyse climate extremes, hazards, and sectoral vulnerabilities; • Building capacity of *REMA, and the NAP TWG and district officials to interpret and using downscaled projections for planning;* • Providing the knowledge base for adaptation investment plans; • Ensuring that risk information is accessible to vulnerable populations and aligned with EW4All. The Action will enhance Rwanda's ability to anticipate climate risks, improve DRR and EWS operations, and strengthen the evidence base for future resource mobilization.
Alignment	*[Max. 250 words articulating the alignment between the requested Action and existing/ongoing projects, programs, plans and commitments (e.g., EWS projects supported by bilateral or multilateral funds, NAP, NDC, efforts within the Santiago Network)]* The Action is fully aligned with Rwanda's national and regional climate resilience agenda. It directly supports **Rwanda's National Adaptation Plan (NAP)**, particularly Component 1 on strengthening technical and institutional capacity for climate information services, and advances the long-term ambitions of **Vision 2050**, which calls for robust, science-based climate risk management across all sectors. It operationalizes the climate information pillars of **Rwanda's NDC, National Environment and Climate Change Policy** and the **Green Growth and Climate Resilience Strategy**, which require national capability to generate and apply downscaled projections for agriculture, water resources, land management, health, and disaster risk management. The Action builds on REMA and METEO RWANDA's ongoing work developing **ecosystem-based and socio-economic climate risk assessments for priority catchments**, enabling the integration of updated projections and

	extreme-event indicators into future assessments and adaptation plans. It strengthens national readiness to implement the **Early Warnings for All (EW4All)** Initiative by enhancing risk information (Pillar 1) and monitoring, analysis, and forecasting capacity (Pillar 2), and by improving the delivery of actionable climate services to vulnerable populations. Regionally, the Action is coherent with **CREWS East Africa**, the **WISER** programme, ICPAC's **Regional Climate Services Framework**, RSMC Nairobi's monitoring functions, and ongoing WMO capacity-building on climate modelling, WIS2.0, and impact-based forecasting. Internationally, it aligns with the **UNFCCC Santiago Network** mandate to strengthen technical support for climate risk assessments, and positions Rwanda for future **GCF Readiness** and adaptation funding by providing the scientific foundation—updated projections, risk maps, and sectoral analytics—required for investment planning and proposal development.
Timeframe	*[Projected duration, in months; must be less than 12 months or include justification for longer duration (e.g., if linked to another project that extends beyond 12 months)]]* *9 months*
Action Cost *(To be completed by Implementing Partner)*	*[Action amount requested in USD, including Implementing Partner fees]* The total estimated cost of the Action is **USD 249,730**, including a 13% WMO Programme Support Cost (PSC). Direct costs total USD 221,000 and cover technical expertise, equipment, capacity development, data processing tools, stakeholder engagement, and production of climate-risk outputs. The inclusion of essential equipment will enable METEO RWANDA to operationalize and sustain national climate projection and risk-information workflows. The budget remains fully within the CREWS Accelerated Support Window ceiling of USD 250,000
Attachments	*[Country Endorsement Letter or similar[1] if submission by Implementing Partner]* *[Detailed Activity List to be provided by Implementing Partner]*

[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.

Annex 1: CREWS ASW budget (USD 249,730)

Budget Category	Line Item	Description	Subtotal (USD)
1. Technical Expertise & Modelling Support	International Climate Modelling Expert	Downscaling, bias correction, ensemble development, extremes analysis.	36,000
	Regional Climate Modelling Expert	CMIP and CORDEX processing, validation, calibration.	18,000
	National Technical Expert Support	Local modelling support and integration with METEO RWANDA systems.	12,000
	Risk Analytics & Scenario Specialist	Climate-in-Context scenario development and narratives.	14,000
	Technical Editing & Quality Assurance	Final technical review and quality control.	3,000
	Subtotal Technical Expertise		**95,000**
2. Capacity Development Workshops	Venue Hire & Logistics	Technical modelling and analysis workshops.	6000
	DSA for Participants	Government, METEO RWANDA, REMA, TWG.	18,000
	Training Materials & Printing	Manuals, handouts, exercises.	3,000
	Trainer Fees (Local)	Local facilitators and trainers.	2,000
	Local Transport	Participant transfers.	2,000
	Contingency (Additional 1-day Session)	For expanded training.	4,000
	Subtotal Workshops		**35,000**
3. Data Processing, Cloud Tools & Software	Cloud Computing	Storage & processing of CMIP & CORDEX datasets.	5,000
	Software Licenses (GIS & Statistical Tools)	GIS tools, R/Python libraries.	3,000
	Secure Data Storage & Backup	10 TB external storage	2,500
	Server Configuration / IT Support	Setup & integration.	2,000
	Data Cleaning & Pre-Processing Tools	QC and climate indices.	2,500
	Documentation & Data Archiving	Standardized process documentation.	3,000
	Subtotal Data Processing		**18,000**
4. Equipment	High-Performance Workstations	For modelling & big-data analysis.	8,000
	Laptops for Technical Staff	For analysis, modelling, & field validation.	6,000
	External Backup Storage (10–20 TB)	Archiving modelling datasets.	2,400
	UPS / Power Backup Units	Ensures continuity during modelling runs.	1,600
	Network Switches / Cabling	Integration of equipment.	1,000
	Accessories & Configuration	Software installation, setup.	3,000

	Subtotal Equipment		**22,000**
5. Stakeholder Consultations & Validation	Multi-Stakeholder, Workshop, Consultations including travel & Logistics		20,000
6. Communication Products & Knowledge Outputs	Policy Briefs (x4)	Agriculture, water, land, DRR.	4,000
	Climate-Risk Maps & Graphics	GIS mapping and visual design.	3,000
	Technical Report Layout & Publishing	Typesetting, visualization.	3,000
	Summary for Decision Makers	High-level document.	2,000
	Translation (EN–FR/Kinyarwanda)	—	1,000
	Dissemination (Printing & Distribution)	—	2,000
	Subtotal Communication Outputs		**15,000**
7. Project Management & Coordination	Project Coordination, administration, monitoring and Reporting	Coordination, Procurement, contracts, reporting, Quarterly reports and M&E reports	16,000
8. WMO PSC (13%)	PSC Calculation	Standard WMO PSC.	**28,730**
TOTAL BUDGET	—	Fully compliant with CREWS ASW ceiling.	**USD 249,730**

Annex 2: IMPLEMENTATION plan

Activity Category & Tasks	M1	M2	M3	M4	M5	M6	M7	M8	M9
1. Project Inception & Mobilization									
Kick-off meeting (WMO–METEO RWANDA–REMA)	●								
Finalization of workplan & engagement plan	●★								
Procurement of equipment & software	●	●							
Setup of modelling environment (servers/tools)		●	—						
2. Data Acquisition, Processing & Downscaling									
Acquisition of CORDEX/RCM datasets		●	●						
QC of observational datasets		●	●						
Model validation & bias correction			●	●					
Development of downscaled projections			●	●	●				
Internal technical review				●	●★				
3. Climate Risk Analytics & Scenario Development									
Identify climate risk domains & sector needs			●	●					
Climate-in-Context scenario construction				●	●	●			
Develop sector & catchment risk maps					●	●			
Draft climate risk narratives					●	●★			
4. Capacity Development Workshops									
Workshop 1: Modelling & downscaling methods		●							
Workshop 2: Extremes, bias correction, validation			●						
Workshop 3: Interpretation & communication					●★				
5. Stakeholder Engagement & Co-Production									
TWG technical sessions		—	—	—	—	—			
Catchment-level consultations			●	●	●★				
Sectoral validation meetings					●	●	●★		
6. Communication Products & Final Deliverables									
Draft technical report					●	●			
Draft policy briefs, maps, summary					●	●	●		
Final deliverables (reports, maps, briefs)							●★		
National dissemination event								●★	
7. Project Management, Monitoring & Reporting									
Coordination & steering committee	●	—	—	—	—	—	—	—	
Quarterly progress reports		★	★	★	★				
Final project completion report									

Legend

- ● = Major activity
- — = Ongoing / continuous
- ★ = Key Deliverable / Milestone