



CREWS PROJECT PROGRESS REPORT (Jan - Dec 2023)

1. Project title	Strengthening Operational Forecasting & Early Warning Systems in the South-West Indian Ocean	2. Project reference CREWS/RProj07/South West Indian Ocean
3. Implementing Partners involved in the project	WMO (lead) World Bank UNDRR	4. Regional/National Partners involved in the project Regional: IOC Commission, RSMC La Réunion, RTC and RSMC Pretoria, EUMETSAT, RWC Casablanca National: meteorological, hydrological, civil protection and DRR services from Comoros, Madagascar, Mauritius, Seychelles and Mozambique
5. Project Duration/Timeframe	Q3 2020 – Q2 2025	6. Total Funding Approved by Steering Committee (in US dollars), including fees 4,000,000
7. Reporting focal point(s)	Jean-Baptiste Migraine – jbmigraine@wmo.int Muliro Mashauri – muliro.mashauri@un.org Keren Carla Charles – kcharles1@worldbank.org UNDRR: Roberto Schiano Lomoriello - roberto.schianolomoriello@un.org , Adair Ackley - adair.ackley@un.org , Carlyn Yu – carlyne.yu@un.org , Mirna Abu Ata – abuata@un.org Stefanie Dannenmann-Di Palma – dannenmann@un.org	

8. Project overview	<p>Please include objectives, key project deliverables, leveraging, contextual information/statistics, significant events during the reporting period in bullet points. (max 250 words)</p> <p>The overall project objective is to enhance the adaptive capacity and climate resilience of communities and economic sectors in five countries of the SWIO region. This will involve strengthening multi-hazard and impact-based early warning systems through: (i) improving the regional cooperation frameworks for forecasting of climate and weather, including seasonal and sub-seasonal outlooks, tropical cyclones, storm surges, other severe weather events, flooding and climate extremes; and (ii) supporting dissemination, emergency planning and response capacities in each of the beneficiary countries.</p> <p>This project works in synergies with, and leverage resources (about 100 million USD in total) from several initiatives in the region such as the World Bank (WB)-funded Mozambique Disaster Risk Management (DRM) and Resilience Program (96 million USD, P166437), the French Development Agency (AFD)-WB DRM program with Cat-DDO in Madagascar (50 million USD, P167941), the EU-funded Intra-ACP Climate Services Programme (6 million EUR through AFD, ClimSA), the EU-funded 11th EDF Resilience building and Disaster Response Management in the Indian Ocean (pipeline), WMO Severe Weather Forecasting Programme, WMO RA I Tropical Cyclone Committee, GCF-AFD Building Resilience through Strengthened Meteorological, Hydrological and Climate Services in the Indian Ocean Commission Member Countries (68 million USD, Hydromet Project).</p>
9. Progress summary	<p>What has been achieved during this reporting period? – Please list in bullet points the most significant and tangible outcomes? (Highlight at least 1 key achievement that can be elaborated in the 2022 Annual Report). (max 250 words)</p> <p>REGIONAL :</p> <ul style="list-style-type: none"> • WB conducted gap assessments in the targeted countries to better understand the challenges faced and how the CREWS-SWIO program could support the countries in building their EWS capacity. The findings / recommendations from these assessments are informing and being

	<p>used in WB's new regional operation on disaster risk management, the Regional Climate Resilience Project for Eastern and Southern Africa, P180171, (RCRP), specifically in Comoros and in Madagascar</p> <ul style="list-style-type: none"> • UNDRR participated at the South-West Indian Ocean Climate Outlook Forum (SWIOCOF) in September 2023 and presented on the EW4All initiative highlighting CREWS being a key delivery vehicles of this initiative. • . • WMO through RSMC Pretoria conducted a RSMT meeting to prepare for expansion of the FFGS and nowcasting products to SWIO countries currently not covered • WMO through RSMC La Réunion started operational ..., made available from a dedicated server launched at the 30th anniversary of RSMC La Réunion in Oct 2023. • The 3 CREWS IPs finalized a regional diagnostic report with investment recommendations. Discussions with regional stakeholders and NMHSs in the SWIO for validation of the regional diagnostic report carried out in April 2023. • WMO participated in the Hydromet regional project steering committee meeting on 22 September 2023 and delivered a presentation about comparative advantages of CREWS (Bank- and UN- executed) compared to investment financing and programs for results. <p>NATIONAL:</p> <ul style="list-style-type: none"> • In Comoros, <ul style="list-style-type: none"> ○ A joint WB-WMO mission took place in May 2023 (see WMO report / WB aide mémoire) ○ WB delivered to the Comorian Government a 51-page investment plan with emphasis on EP&R, entitled: "COMORES : FEUILLES DE ROUTE POUR AMÉLIORER LE SYSTÈME
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	<p>NATIONAL D'ALERTE PRÉCOCE. Recommendations techniques pour renforcer le système national d'alerte précoce (SAP) hydrométéorologique aux Comores. Contributions à un plan d'investissement, en mettant l'accent sur la préparation et la réponse aux situations d'urgence.¹ The assessment was completed during the reporting period and all materials handed over in November 2023. The outputs of this consultancy also informed the RCRP project being implemented in Comoros.</p> <ul style="list-style-type: none"> ○ WB is also supporting a Feasibility Study for implementing Cell Broadcast technology as a communication medium for MHEWS. Discussions with WMO and ITU have been initiated and an international consulting firm is likely to be recruited for this activity. The Terms of Reference is presently under preparation. ○ ● In Madagascar, <ul style="list-style-type: none"> ○ UNDRR participated in the EW4All workshop on 14-15 September 2023 that was organized by the UN Country Team (see report) and annexes for each EW4ALL pillar gaps analysis. UNDRR presented on Pillar 1. WMO prepared the Pillar 2 action plan. WB also participated in the Development Partners session. ○ WB delivered 2 sets of 3 Days of Training and Capacity Building Workshops for DRM decision makers and stakeholders at National and Regional Levels in Antananarivo, Mahanjanga in July and in Tulear September 2023. ○ WB is supporting BNGRC (Bureau Nationale des Gestions des Risques et des Catastrophes) for the development of a National Emergency Operations Plans (NEOP) expected to be completed this year. The Draft NEOP has been produced maintaining the important role of the UN and other agencies in post disaster recovery but introduces a more structured Government-led coordination system to improve
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¹ Translation: COMOROS: ROADMAPS TO IMPROVE THE NATIONAL EARLY WARNING SYSTEM (EWS). Technical recommendations to strengthen the national hydrometeorological EWS in the Comoros. Contributions to an investment plan, with emphasis on emergency preparedness and response




	<p>emergency preparedness and response within existing legislation. The NEOP clarifies the role of early warning in the disaster management cycle, and the importance of effective warning dissemination and effective early action at both national and sub-national levels. Elections in late 2023 delayed the finalization and adoption of the NEOP. It is intended to conduct a national validation workshop followed by training of agencies in its operationalization at national and sub-national levels.</p> <ul style="list-style-type: none"> ○ WB is supporting the RCRP in Madagascar, with the above information. ○ WB supported in conducting a National EP&R Assessment and Investment Plan. The project delivered an EP&R Assessment Report and an Investment Plan in both English and French. ○ WB participated in the EW4All Workshop in Antananarivo in September 2023. <ul style="list-style-type: none"> ● In Mauritius, <ul style="list-style-type: none"> ○ WMO participated at the EW4All workshop and conducted two missions (July, Oct) to support MMS with the development of a Strategic Plan. ○ WB provided support and participated in the SARCOF Event, 25-27 September 2023. ○ ○ UNDRR organized and led the launch of EW4All initiative, which took place in December 2023 and conducted one mission at the margins of the SWIOCOF to present the EW4All initiative Indian Ocean Commission Member States. During the EW4ALL launch, representatives from relevant ministries, national and local government agencies, development partners as well as civil society organizations presented the current status, advancements, and challenges that their respective organizations face when implementing early warning systems in Mauritius. Participants undertook a gap analysis exercise, drawing from prior assessments, to identify the critical gaps as well as priority needs for support across the four early warning pillars, namely 1) Disaster Risk knowledge; 2) Detection, observations, monitoring analysis and forecasting of
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	<p>hazards; 3) Warning, dissemination and communication; and 4) Preparedness and response capabilities. They agreed on a coordination mechanism and on developing a roadmap, next steps, and recommendations for the EW4All initiative's implementation.</p> <ul style="list-style-type: none"> • In Mozambique, <ul style="list-style-type: none"> ○ WB is leading the efforts under the CREWS project, interacting with the Mozambique Disaster Risk Management and Resilience Program (P166437) ○ WB completed the study “Technical Recommendations on Options for Strengthening the Design and Implementation of Accurate Flood Modelling for Messalo and Megaruma River Basins in Northern Mozambique”, carried-out by Dutch Institute Deltares between October 2022 and May 2023. The outcomes inform Mozambique's hydrological agency, DNGRH, on how best to invest in improving flood modeling in the northern Cabo Delgado province. ○ WMO organized the EW4All workshop on 20-22 November 2023. UNDRR participated in the workshop. WB also joined during the Development Partners session. ○ A two-week course has been provided by UNDP and a private firm • In Seychelles, <ul style="list-style-type: none"> ○ WMO conducted two missions (July, Oct) to support SMA with the development of a Strategic Plan. ○ WB supported DRMD for the Operationalization of the National Integrated Emergency Management Plan (NIEMP) followed by Training of Decision Makers and Senior DRM Officials in their respective roles and responsibilities. Several rounds of capacity building and training have been delivered for both National and Local stakeholders on the NIEMP and District Plans, although more work is required to ensure that individual MDAs have fully internalized the revised disaster coordination and governance arrangements.
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	<ul style="list-style-type: none"> ○ WB also supported the review of the national Port Emergency Response Plan and Airport Emergency Response Plan. This was followed by a series of two days' training and capacity building for senior officials of relevant MDAs in multi-agency coordination by using Port and Airport emergency situations to test and validate the plans. ○ In December 2023, a State of Emergency was declared in Seychelles following extensive flooding, landslide, and a large explosion. The WB provided remote support for DRMD and mobilized a team to assist Government in-country with a Rapid Damage and Loss Assessment (RDaLA). ○ WB is also conducting a multi-agency coordinating with the UN and other development and diplomatic partners to assist the Government for the implementation of the short and long-term recovery plan based on the RDaLA in aftermath of the flooding, landslide and explosion which occurred in December 2023. ○ UNDRR contributed to the MHEWS diagnostic.
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10. Project Performance

Interpretation of color coding		
	High	Good progress; on track in most or all aspects of delivery
	Medium	Moderate progress or on track in some aspects of delivery
	Low	Less than moderate or poor progress. Not on track in critical areas of its delivery. Requires remedial attention

	Rate of expenditure	Rate of delivery	Alignment of Objectives
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Coding			
Narrative	<p>Use of funds as of 31 Dec 2023: WMO – US\$xxx disbursed (xx%) and US\$ xxx committed (xx%)</p> <p>WB – US\$1.2 million disbursed (77%) and US\$ 84.3K committed (5%)</p> <p>UNDRR – Total spent (obligations + actuals inclusive of PSC): USD 530,656 Total exp. (%): 45%</p> <p>A request for additional financing is being prepared, to be submitted early 2024.</p>	<p>During the reporting period, the rate of delivery is satisfactory. The project is still delayed overall in relation with the late start of the AFD-funded IOC-led Hydromet project, which is expected to start in Q4 2024.</p>	<p>The activities remain well aligned with the objective of the project.</p>

11. Risk Management Status

Risk Status	<p>What is the current risk status as compared to what was identified in the project proposal?</p> <p>The current risk rating for the overall project remains at Medium, as indicated in the proposal. Some of the key contributing factors to the risk are political/institutional, human resources and capacity, technology etc.</p>
Measures to address	<p>What mitigation measures have been developed to address the risk status?</p>

	<p>Political/Institutional: WMO provides guidance to IOC to support the accreditation of WMO regional centers; in addition, through the Project Steering Committee, participation of all relevant national and regional institutions will be ensured.</p> <p>Human Resources/Capacity: The project supports the equivalent of 2 full time staff spread between headquarters and regional/national offices of the project partners and establish partnership agreements with the more developed NMHSs in the region.</p> <p>Technology: To address the issue of technology, the project provides for specific design with a focus on localized solutions.</p>
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12. Contributions to CREWS Output(s)s

a. Overall Outputs

State Project Output(s) in this section	Overall Project Target	Progress by Dec 2022	Target for reporting period	Progress by Dec 2023
Monitoring and forecasting of climate and weather, including seasonal and subseasonal outlooks, tropical cyclones, storm surges, other severe weather events, flooding and climate extremes are improved	4 regional centers are designated to support the 5 LDCs and SIDS	2 (La Réunion, Pretoria)	2	2
	4 hazards for which forecasting and warning capacity is available in all 5 countries	2 (tropical cyclone, drought)	2	2
Warning dissemination, emergency planning and response capacities are improved	20% increase in # of people living in areas covered by forecasts	0%	0%	0%

	and warnings for select hazards			
	2 LDCs and SIDS have risk information available to feed the early warning systems	0	0	0
	3 of LDCs and SIDS communicating warnings through common alerting protocol (CAP)	1 (Madagascar)	1	1

11.1 National Output(s)s

CREWS Output(s) 1: National Meteorological and Hydrological Services service delivery improved, including the development of long-term service delivery strategies and development plans

State Project Output(s) in this section	Overall Project Target	Progress by Dec 2022	Target for reporting period	Progress by Dec 2023
1.1 - Countries have received advisory services for optimal use of investments resources at national level	600 days of advisory services have been provided to Comoros, Madagascar, Mauritius, Seychelles	150 days	150 days	150 days

	250 days of advisory services have been provided to Mozambique	120 days	120 days	120 days
1.2 - The service delivery capacity of NMHSs is increasing	average level of service from the 5 NMHSs enhances by 1 level (from 1 – basic, to 4 – Advanced)	0	0	0
<p>CONTRIBUTION TO CREWS VALUE PROPOSITION: PROMOTE COHERENCE - Programming considers existing projects and other international partner initiatives to ensure value-added to the national context and needs.</p> <p>The CREWS SWIO project is interacting and ensuring coherence among 3 WB projects, 1 UNDRR project and 1 AFD project, supporting mobilization of experts to ensure coherent institutional, alerting procedures and capacity development planning to take advantage of all opportunities while taking advantage of individual projects' respective comparative advantages.</p>				

CREWS National Output 2: Risk Information to guide early warning systems and climate and weather service developed and accessible

State Project Output(s) in this section	Overall Project Target	Progress by Dec 2022	Target for reporting period	Progress by Dec 2023
2.1 - Developing a risk and flood impact modeling platform to guide EWS in INGC Mozambique	5 EW stakeholders are contributing risk information at national level in Mozambique	0	0	0

2.2 - Developing risk information to guide EWS in Comoros, Madagascar, Mauritius, Seychelles	5 EW stakeholders are contributing risk information at national level in each IOC LDC & SIDS	0	0	0
<p>CONTRIBUTION TO CREWS VALUE PROPOSITION: SOLUTION-ORIENTED - Good and innovative practices are applied and shared continuously across national and regional projects.</p> <p>In Seychelles, the World Bank is supporting the revision of the DRM policies to strengthen the link between forecasting and early action. Several working meetings were held and a revised policy text is in preparation, while in the meantime WMO is planning to support the update of the NMHS Strategic Plan.</p> <p>In Mozambique, the World Bank is enhancing risk information in two river basins in the province of Cabo Delgado, with the view to identify priority areas and enhance flood forecasting skills for warning.</p>				

CREWS National Output 3: Information and Communication Technology, including common alerting protocol, strengthened

State Project Output(s) in this section	Overall Project Target	Progress by Dec 2022	Target for reporting period	Progress by Dec 2023
3.1 - Provision of detailed guidance for common alerting protocol implementation in the 5 countries	5 countries in which NMHSs are trained on dissemination of forecasts and warning advisories using CAP format	0	0	0
3.2 - Dissemination systems in Mozambique	# people reached by SMS warnings	0	0	0

CONTRIBUTION TO CREWS VALUE PROPOSITION: SOLUTION-ORIENTED - Good and innovative practices are applied and shared continuously across national and regional projects.

In Mozambique, the strategy has been developed, which will identify the number of people that will be reached by the EWS communication system. The WB has provided feedback on the system and expect that it would be operational by the end of 2022.

In Comoros, Madagascar, Mauritius and Seychelles, the WB has conducted a diagnostic of the information communication systems and developed recommendations for how they could be strengthened. In Seychelles, the team has developed a training program at the political, technical and community level to be implemented in 2022.

CREWS National Output 4: Preparedness and response plans with operational procedures that outline early warning dissemination processes developed and accessible

State Project Output(s) in this section	Overall Project Target	Progress by Dec 2022	Target for reporting period	Progress by Dec 2023
4.1 - Advising INGC, INAM, and DNGRH on the development and implementation of integrated early warning systems in Mozambique	# EW stakeholders contributing in warning issuance decision process at national level in Mozambique	3 (DRM, meteo, hydro)	3 (DRM, meteo, hydro)	3 (DRM, meteo, hydro)
4.2 - Advising Comoros, Madagascar, Mauritius, Seychelles on the development and implementation of integrated early warning systems	# EW stakeholders contributing in warning issuance decision process at national level in IOC LDC & SIDS	2 (DRM, meteo)	2 (DRM, meteo)	2 (DRM, meteo)



CONTRIBUTION TO CREWS VALUE PROPOSITION: UNIQUE - A financing mechanism that builds sustained institutional capacity driven by countries and supported by the expertise and specialist networks of its partners: in Mozambique, the CREWS project works closely with the Disaster Risk Management (DRM) and Resilience Program (96 million USD, [P166437](#)), to strengthen the capacity of national institutions (INGC, INAM and DNGRH) altogether; in Comoros, Madagascar, Mauritius and Seychelles, a similar approach will be developed, as soon as the investment projects will become effective.

CREWS National Output 5: Knowledge products and awareness programmes on early warnings developed				
State Project Output(s) in this section	Overall Project Target	Progress by Dec 2022	Target for reporting period	Progress by Dec 2023
5.1 - Diagnostic and recommendations on multi-hazard early warning operational procedures	# countries with MHEWS diagnostic	3 (Seychelles, Mauritius and Comoros) + 1 (regional)	4	4
<p>CONTRIBUTION TO CREWS VALUE PROPOSITION: PEOPLE-CENTERED - Local organizations are listened to and engaged so that investments are driven by the needs of end-users.</p> <p>The diagnostic started in Q3 2021 by 3 consultants selected for this mission, each focusing on a specific area, along these Terms of Reference : water governance, meteorology and marine, institutional development, and opportunities for investments. The assessments at national and regional levels have been done through virtual stakeholders' meetings (both individual and collectively), wherein user requirements have been gathered (some also expressed in national frameworks for climate services), and limitations and gaps have been identified as a starting point to recommend investments in NMHSs, risk assessment, telecommunications and emergency response.</p>				

11.2 Regional Output(s)

CREWS Regional Output(s): Institutional and human capacities at Regional WMO and Intergovernmental organizations to provide regional climate and weather services to LDCs and SIDS increased

State Project Output(s) in this section	Overall Project Target	Progress by Dec 2022	Target for reporting period	Progress by Dec 2023
SWIO-COF is established according to WMO standards (with support from Intra-ACP Climate Services and AFD Hydromet Grants)	5 countries have access to enhanced regional climate services	0	0	0
Regional WIGOS centers are established according to WMO standards (with funding from the countries)	3 RWC guidance notes are developed (Tanzania, Kenya & SAWS)	0	0	0
Regional instrument center is working according to WMO standards (with support from AFD Hydromet Grants)	1 regional calibration guidance notes developed	0	0	0
SAWS capacities to support NMHSs with severe weather forecasting guidance is enhanced	Pretoria RSMC severe weather reaches 20 years of operation	16	16	16
TCC and TC RMSC support to provide guidance about tropical cyclone, coastal inundation and storm surge forecasting	4 twinning arrangements ensure provision of guidance from developed NMHSs to developing NMHSs	2	2	2
WMO proposes a detailed road map with regards to flood forecasting (urban, coastal, riverine) for each country	4 countries with access to flood forecasting guidance	0	0	0

The 4 countries have established regular consultation and Sendai Framework Target G common custom indicators	4 countries trained on Sendai Framework Target G custom indicators	0	4	(Seychelles, Mauritius, Madagascar, Comoros) trained on Target G custom indicators in November 2022
<p>CONTRIBUTION TO CREWS VALUE PROPOSITION: MULTIPLIER- Country portfolios promote a favorable environment for, and leveraging of, effective additional financing.</p> <p>The project is operated in synergy, and leverages resources (about 100 million USD in total) from several initiatives in the region such as the WB-funded Mozambique Disaster Risk Management and Resilience Program (96 million USD, P166437), the WB-funded AFD-WB DRM program with Cat-DDO in Madagascar (50 million USD, P167941), the EU-funded Intra-ACP Climate Services Programme (6 million EUR through AFD, ClimSA), the EU-funded 11th EDF Resilience building and Disaster Response Management in the Indian Ocean (pipeline), WMO Severe Weather Forecasting Programme, WMO RA I Tropical Cyclone Committee, French Development Agency's (AFD) Building Resilience through Strengthened Meteorological, Hydrological and Climate Services in the Indian Ocean Commission Member Countries (71.4 million USD, Hydromet Project).</p> <p>The Regional training workshop on measuring the effectiveness of multi-hazard early warning systems in the Indian Ocean was held in Balaclava, Mauritius on 3-4 November 2022. The workshop was co-facilitated by UNDRR and WMO based on training tools developed by the UNDRR Global Education and Training Institute (GETI). The workshop was made possible through financial support from the CREWS initiative and from ECHO for the participation of representatives from Malawi. Group activities included identifying lists of priority hazards, regional agreements in place between countries, what makes a warning effective, and prioritization of custom indicators.</p>				

13. Visibility products

Insert or copy any links to press releases, videos or communication items and/or social media links produced during the reporting period only



**Supporting regional cooperation to strengthen
seamless operational forecasting and multi
hazard early warning systems at national level in
the South-West Indian Ocean
(CREWS SWIO)**

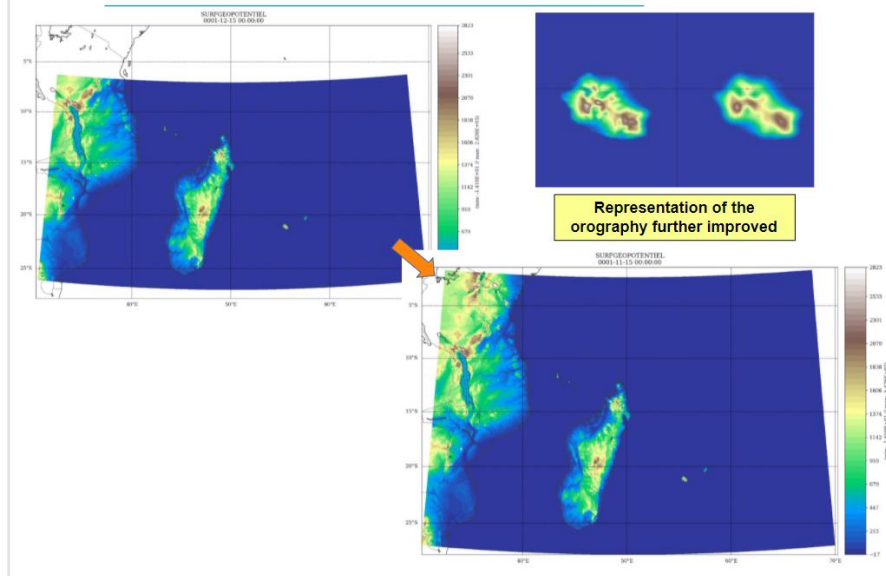


Updated 23 July 2021

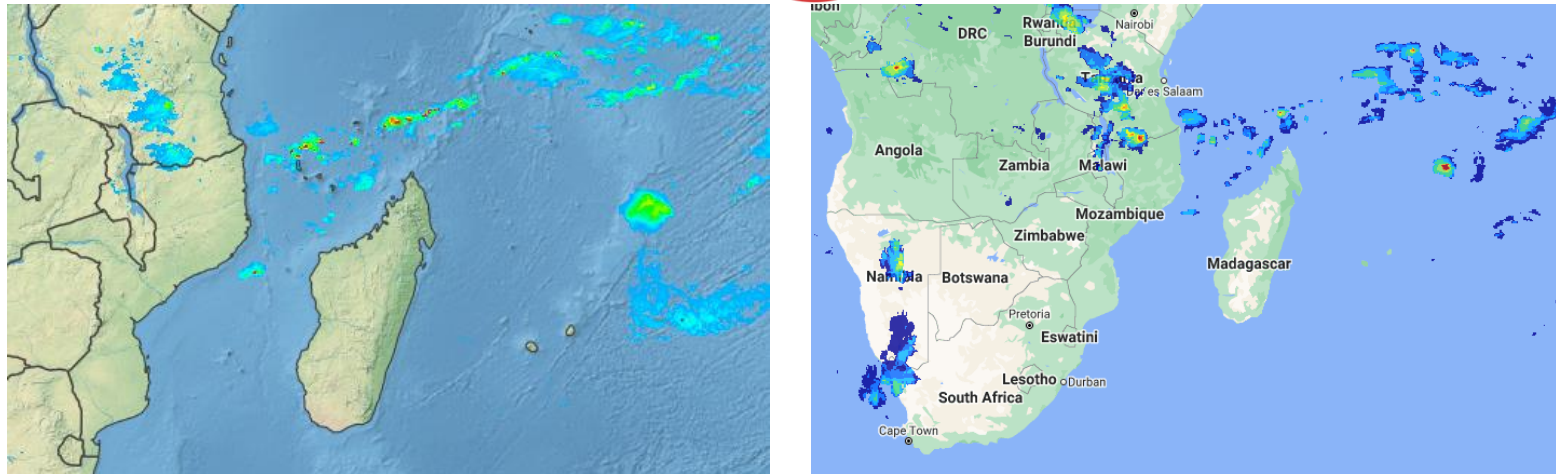


[Project presentation](#)

Arome Indian Ocean horizontal domain



[RSMC La Réunion presentation – expansion of the open access AROME high-resolution model, now covering Seychelles](#)




EUMETSAT (left) and JAXA (right) – collaboration to ensure optimal use of rainfall space-based products (EUMETSAT MPE and JAXA GSMaP) for Severe Weather Forecasting programme (SWFP) and Space-based Weather and Climate Extremes Monitoring (SWCEP) over SWIO

Mauritius: <https://www.undrr.org/news/united-nations-secretary-generals-early-warnings-all-initiative-launched-mauritius>

14. Supporting documents

List and annex to the report any documents providing details on project activities such as reports of training sessions, assessment reports, online solutions and tools, manuals, summaries of high-level discussions etc.

	WMO Implementing Arrangement with RSMC La Réunion (signed 8 July 2021)
	WMO Implementing Arrangement with RSMC Pretoria (signed 6 Sept 2021)

	<p>Webinaire d'échange technique sur l'état des lieux des équipements (19 oct 2023)</p> <p>https://filecloud.wmo.int/share/s/qVC5agxIStu78Wbf6O5VGQ</p>
	<p>Regional training workshop on measuring the effectiveness of multi-hazard early warning systems in the Indian Ocean Report</p>

REGIONAL :

- WB is considering a new regional operation on disaster risk management. Made use of the recent post-cyclone season hot debriefs, producing three reports by the end of June (Review of Early Warning Systems Performance for Mozambique and separately for Madagascar and Review of Regional Entities Contributions to Early Warning Systems During Cyclone Season 2021-2022), giving an up-to-date, directly-from-the-source overview of most pressing gaps, to inform follow-up, ongoing activities.
- UNDRR conducted a training on [custom indicators to measure the effectiveness of MHEWS](#). Representatives from MET offices and NDMAs from Mauritius, Seychelles, Madagascar and Comoros attended the training, which took place on 3-4 November 2022 in Mauritius.
- UNDRR started discussions with IOC to revive the IOC regional DRR platform in order to initiate a community of practice for early warning standard operating procedures (also in relation with the [Resilience building and Disaster Response Management in the Indian Ocean \(RDRM-IO\) programme](#)).
- RSMC Pretoria prepared for expansion of the nowcasting products to include the SWIO countries currently not covered
- RSMC La Réunion developed probabilistic products and outlook for upcoming cyclonic activity; a dedicated server is currently being installed to provide access to these products as well as NWP product outputs.



- A [regional diagnostic report](#) and development of investment recommendations has been prepared. Discussions with regional stakeholders and NMHSs in the SWIO for validation of the regional diagnostic report are expected to be carried out in April 2023.

NATIONAL :

- Detailed diagnostic and development of investment recommendations for NMHSs (with 3 consultants) is ongoing (see [ToR](#)); drafts have been prepared for Seychelles, [Mauritius](#) and [Comoros](#), and discussions with the national stakeholders are being carried out for their validation. A similar diagnostic report is being finalized for Madagascar. The outputs will directly inform the AFD Hydromet project (to be formally launched on 23 Sept 2022), the design of the proposed WB resilience project in Madagascar and the implementation of the WB resilience project in Comoros.
- In Comoros,
 - The ToR for *Comoros Early-Warning Platform* was prepared and PREDICT was selected as the consultant. The scope and goal were discussed with DGSC, ANACM and OVK, following the outcome from the EWS assessment report. Contract has been signed, the assignment begins in January 2023. A joint WMO-WB mission is planned on 8-12 May 2023 to follow-up.
 - Government officials have been sponsored by UNDRR to attend the Global Platform for DRR
- In Madagascar,
 - CREWS has enabled an international expert to provide technical guidance on *Consultancy Services for Conducting a Rapid Emergency Preparedness and Response (EP&R) Capacity Assessment at the Regional and Local Levels and Developing an Investment Plan*. This activity is WB funded in close collaboration with the Government and it aims to (a) conduct an EP&R capacity assessment in Madagascar to face disasters, mainly cyclones, flood, droughts, fire, and incidents of mass casualty violence; and (b) identify priority EP&R investments at the national and sub-national levels and formulate an Investment Plan in alignment with the Madagascar DRM and Resilience Project.
- In Mauritius,
 - Continuation of iterations with MMS and NDRRMC to converge on a MHEWS diagnostic report.
 - A joint WMO-WB mission was organized in Nov 2022 (see [WMO report](#) / [WB aide-mémoire](#)), a concept note was prepared for the consideration of the Minister, and the Government is yet to confirm the directions proposed under CREWS SWIO.
- In Mozambique,



- the CREWS project is directly interacting with the Mozambique Disaster Risk Management and Resilience Program ([P166437](#))
- Deltares was hired to produce technical recommendations to support the development and implementation of flood models for Cabo Delgado's rivers Messalo & Megaruma.
- an operational training to strengthen the capacity of INAM in the production of state-of-the-art precipitation and wind forecasts based on Numerical Weather Prediction outputs by South African Weather Service (SAWS) was initiated in April and continued during the reporting period on coding and using forecasts and converting them into decision support. Another consultancy was prepared (TOR drafted) to help enhance the absorption of the above: A national firm is being sought for a Technical Assistance to strengthen the capacity of INAM to more effectively handle, interpret and share Numerical Weather Prediction (NWP) data, including also basic programming skills. Expected to start in Q2, 2023.
- a request for expression of interest for a consultancy was launched for a training on data collection and post-disaster needs assessment with INGD, INAM and DNGRH officials. A two-week course will be provided by UNDP and a private firm in May-June 2023.
- In Seychelles,
 - A two-week mission to Victoria, to provide assistance in operationalizing the Seychelles national EWS plan and to give hands-on training to managers (train the trainers), happened in August 2022.
 - A mission is being scheduled for early July 2023 to support updating the SMA Strategic Plan (see [previous version, 2019-2023](#))
 - Government officials have been sponsored by UNDRR to attend the Global Platform for DRR.
 - UNDRR provided comments and additional information to the diagnostic produced by WMO in coordination with the WB.

	IA ; Work plan
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	IA ; Work plan
Consultancy (SSA contract) with Alice Soares (meteorology, marine)	ToRs
Consultancy (SSA contract) with Rose Osindealabaster (hydrology)	ToRs
Consultancy (SSA contract) with Yvette Ramos (institutional strengthening)	ToRs
Training on use of R-Instat for analysis of climate datasets	Training report
Inception report for the MHEWS Diagnostic	Inception report
UNDRR facilitated the participation of representations from the Indian Ocean Commission and Member States to attend the Global Platform for DRR in Bali, Indonesia in May 2022 which led to the Bali Agenda for Resilience. This allowed cross fertilization with other Island States and SIDS from the Caribbean and Asia Pacific. Parallel conversations have been organized between IOC countries to discuss common priorities in disaster preparedness.	Co-Chairs' Summary: Bali Agenda for Resilience: From risk to resilience: Towards sustainable development for all in a COVID-19 transformed world?