



## CREWS PROJECT PROGRESS REPORT

(January - June 2022)

<b>1. Project title</b>	Caribbean - Strengthening Hydro-Meteorological and Early Warning Services	<b>2. Project reference</b> CREWS/CProj/04/Regional Caribbean
<b>3. Implementing Partners involved in the project</b>	World Bank (Lead) World Meteorological Organization UNDRR	<b>4. Operational Partners involved in the project</b> <ul style="list-style-type: none"> <li>• Caribbean Disaster Emergency Management Agency (CDEMA)</li> <li>Caribbean Institute for Meteorology and Hydrology (CIMH)</li> <li>Caribbean Meteorological Organization (CMO)</li> </ul>
<b>5. Project Duration/Timeframe (from year – to year)</b>	June 2018 – December 2022	<b>6. Total Funding Approved by Steering Committee (in US dollars), including fees</b> 6,500,000 <sup>1</sup>
<b>7. Reporting focal point(s) from Implementing Partners</b>	Anna Maria Bogdanova – <a href="mailto:ambogdanova@worldbank.org">ambogdanova@worldbank.org</a>  Other IP focal points: Jair Torres- <a href="mailto:jtorres@eird.org">jtorres@eird.org</a> <a href="mailto:Lina.Sjaavik@wmo.int">Lina Sjaavik – lsjaavik@wmo.int</a>	
<b>8. Project overview</b>	<b>Please include objectives, key project deliverables, leveraging, contextual information/statistics, significant events during the reporting period <u>in bullet points</u>. (max 250 words)</b>	

<sup>1</sup> Including additional funding allocated to UNDRR in 2022



	<p><b>Objectives:</b> To strengthen and streamline regional and national systems and capacity related to weather forecasting, hydrological services, multi-hazard impact-based warnings and service delivery for enhanced decision-making.</p> <p><b>Key Deliverables:</b> (i) Regional roadmap to strengthen and streamline early warning and hydromet services; (ii) Institutional strengthening and streamlining of early warning and hydromet services; (iii) Piloting high priority national activities on end-to-end EWS including impact-based forecasting.</p> <p><b>Leveraging:</b> This project is complemented with US\$ 1.5 million from the CREWS contribution from Canada to WMO.</p> <p><b>Significant events during the reporting period:</b></p> <ul style="list-style-type: none"> <li>• The regional Roadmap has been reviewed by the regional and implementing partners and is being finalized for publication.</li> <li>• The implementation of all Priority Activities is ongoing with all of them being on track.</li> <li>• Launch of IBF Training Program for CARICOM countries.</li> <li>• CariCOF in May 2022 (wet-season) held virtually</li> <li>• Launch of community-based flood management activities in Antigua on 12 May 2022 together with WMO experts from the Regional Office and HQ</li> </ul>
<p>9. Progress summary</p>	<p><b>What has been achieved <u>during this reporting period?</u> – Please list <u>in bullet points</u> the most significant and tangible outcomes? (max 250 words)</b></p> <p><b>Component I:</b></p> <ul style="list-style-type: none"> <li>• A final draft of the Roadmap was produced and reviewed by regional and implementation partners. This final draft included the summary with the main conclusions of an economic analysis which was finalized over this period.</li> <li>• The document was professionally edited and the infographics for the document were produced.</li> </ul>

- The Roadmap is going through the internal review and being prepared for publication in the fall of 2022.
- In line with the CREWS Global Project for Measuring MHEWS effectiveness, the “Caribbean Regional Workshop on Measuring Effectiveness of Early Warning Systems through Sendai Framework Target (g) and Custom Indicators” was held in Port of Spain, Trinidad and Tobago, 10-11 May 2022. It gathered 65 representatives of: National Disaster Management Offices; Regional and National Meteorological and Hydrological Services; and National Offices of Statistics of 22 Caribbean countries and overseas territories .
- In coordination with the Tobago Emergency Management Agency, IFRC, and the Tobago Red Cross Society, a two days Risk Perception Dialogue was organized. The purpose of the activity was to increase understanding of risk and early warning systems perceptions of local and national institutions and communities so as to facilitate increased engagement and use of MHEWS by stakeholder and practitioners.
- A first preliminary version of a mapping of existing national and regional capacities for MHEWS has been developed. This mapping is being now integrated in the Situational Analysis prepared for selected (14) CDEMA Participant States (e.g. Saint Lucia). The first preliminary version will be presented at the upcoming Regional Early Warning Systems Consortium’s meeting.
- The preparations for the development of a REWSC member’s meeting has been launched. In the framework of this meeting the Strategic Roadmap for Advancing MHEWS in the Caribbean 2020-2030, the Mapping of existing capacities of MHEWS in the region, and actions for ensuring synergies among REWSC’s members programmes and activities, will be discussed.

**Component II:**

- BReTCAT Project - Jamaica:
  - New Agreement with BReTCAT project partner Resurgence and amendment of existing Agreement with Meteorological Service of Jamaica, [Ministry of Housing, Urban Renewal, Environment and Climate Change](#) (both February 2022) in order to support additional activities within the BReTCAT project, such as e.g. support the forecast design in localization and configuration of the SmartMet Weather App for Jamaica, support in






	<p>upgrading the website of the Jamaican Meteorological Service to increase user friendliness, etc.</p> <ul style="list-style-type: none"> <li>• Co-design workshop held to improve national forecasts (twice-daily) (March 2022)</li> <li>• Co-design workshop held on new five-day MHEWS service forecasts (April 2022)</li> <li>• Initiation of community-based flood management activities in Antigua (also related to Component III)             <ul style="list-style-type: none"> <li>• Conduction of an inception workshop, as well as community visits and consultations through WMO in coordination with the National Office of Disaster Services of Antigua and Barbuda and the Antigua and Barbuda Meteorological Service (May 2022)</li> <li>• Finalization of Agreement with National Office of Disaster Services of Antigua (will be in force from July 2022)</li> <li>• Finalization of Agreement with Knowledge &amp; Innovation (external experts for WMO) (will be in force from July 2022)</li> <li>• Definition of planned activities as part of this initiative, such as e.g. a regional training workshop on gender mainstreaming in end-to-end early warning systems for flood forecasting and integrated flood risk management, including the provision of a guidance document and action plan for mainstreaming gender, a flood management awareness workshop, a first-aid workshop, the provision of a community-based flood management manual, installation of flood warning signs, vulnerable houses mapping etc. All related activities will be finalized until 30. November 2022.</li> </ul> </li> <li>• Development started of online learning module for “Messaging Tropical Cyclone Threats Before Formation” to be accessible on the WMO moodle platform (to be finalized in November 2022)</li> <li>• New agreement with the Caribbean Meteorological Organization (May 2022) to develop one additional National Strategic Plan (NSP) and Framework for Weather, Water and Climate Services 2022-2026 for the Turks and Caicos Islands. (The agreement will be amended to include the development for an NSP and Framework for Weather, Water and Climate Services for the Cayman Islands and the adaption of the Meteorological Legislation and Policy for Barbados as well - further information will be provided in next reporting period)</li> <li>• Fellowship finalized for studies at University of West Indies - MSc in Natural Resource and Environmental Management</li> </ul>
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**Component III:**

- Four priority/pilot activities are under implementation in this period, namely
  - The development of a precipitation grid prototype in the Eastern Caribbean. The consultations between all involved stakeholders took place between January and May, and the first workshop for the users took place in early July presenting achievements under this pilot. The team has received positive feedback and strong regional endorsement for the product.
  - Supporting the transition to the impact-based forecasting. Implementation plan for the IBF transition was prepared and presented to the regional partners as well as the the RA IV President. A series of webinars on Impact Based Forecasting implementation plan has been developed in partnership with the Weather and Climate Ready Nations program and are being presented (4 out of 7) to the regional and national stakeholders (8 countries).
  - The technical analysis for the development of a regional emergency alert system is underway, with a first draft report developed in this period Integrated approach to flooding: Draft concept has been developed for Saint Lucia, guidance has been developed for Jamaica. Both awaiting countries' feedback and going through stakeholder review.
- A first mapping of sources of information for gathering available, accessible, up-to-date, and recurrent data that could be tailored for integrating impact information on early warning systems was developed for Guyana and Trinidad and Tobago. A discussion with national entities producing this data is planned in order to establish sharing data mechanism aiming to create living repositories of open-source national risk data at the national offices for disaster risk management in both countries.



**10. Project Performance**

Interpretation of color coding		
<b>High</b>		Good progress; on track in most or all aspects of delivery
<b>Medium</b>		Moderate progress or on track in some aspects of delivery
<b>Low</b>		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
<b>Coding</b>			
<b>Narrative</b>	<p>Disbursement June, 2022</p> <p><b>From WB side:</b> Disbursed \$1,967,930 (76% of total amount)</p> <p>Committed \$460,000</p> <p><b>From WMO side:</b> Disbursed \$1,404,161 (61% of total amount)</p> <p><b>From UNDRR side:</b> Disbursed \$ 506,167.00 (38,2% of total amount: 1'325,000.00) Committed \$556,615.00</p>	<p>While several activities have been delayed due to travel restrictions during the covid pandemic, currently key activities are underway/in preparation. Hence, delivery is expected speed up towards the end of the year.</p>	<p>The project remains strongly aligned to the objectives.</p>



### 11. Risk Status

<b>Risk Status</b>	<p>What is the current risk status as compared to what was identified in the project proposal?</p> <p>Low</p>
<b>Measures to address</b>	<p>What mitigation measures have been developed to address the risk status? <u>In bullet points</u></p> <p>In consultations with the regional and implementing partners activities have been adjusted to accommodate for mostly virtual delivery mode</p>

### 12. Contributions to CREWS Output(s)

(use number for activities and products and % for project component completion)

#### 11.1 National Output(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 December 2021	Target for reporting period	Progress by June 2022



National Strategic Plans Developed	Originally: 8 Update June 2022: 9	8	8	8
Model Meteorological Legislation & Policy (Met-Bill) Drafted	1	100% (1 Template Met-Bill)	0 (already finished)	0 (already finished)
Meteorological Bills adapted at national level	Originally: 2 countries Update 2021: 8 countries	6	8	8
<p><b>Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). <u>Please list in bullet points.</u></b></p> <p>Contribution to (selected) CREWS value propositions:</p> <ul style="list-style-type: none"> <li>• <i>Gender responsive &amp; people centered:</i> The legislation, policy and NSPs enable countries to strengthen EWS in a way that will reach more people - specifically the ones most at risk, and further contribute to the concept of people-centered EWS.</li> <li>• <i>Multiplier:</i> The <u>existence</u> of a legislation and policy with clearly defined roles and mandates for the NHMS with corresponding strategies enable NMHS to improve their service delivery which contributes to a more favourable environment for EWS. The associated action plan identifies further needs for external funding.</li> <li>• <i>Promote coherence, unique &amp; solution oriented:</i> Country specific circumstances and initiatives were taken into consideration in the development of the NSPs &amp; Met-Bills. The activities promote building sustained institutional capacity by creating defined legal mandates and identifying gaps in capacity. Additional Caribbean countries, especially Barbados already expressed a wish to develop a legislation and policy adapted to their own needs and circumstances. Turks and Caicos Islands and the Cayman Islands further expressed their wish to develop their own national Strategic Plan and Framework for Weather, Water and Climate as well. (further information in next reporting)</li> </ul>				



## CREWS Output(s) 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 December 2021	Target for the reporting period	Progress by June 2022
Hydrological observation, data management and flood forecasting strengthened	Implementation of a River Flood Forecasting System (IRFF) in Haiti and Dominican Republic	98%	100%	100%
WMO cascading initiatives implemented	2 SWFDP RSMT Meetings	2	0	2
	10 SWFP Regional Trainings conducted. Update June 2022:3	2	2	2
Caribbean Climate Outlook Fora ( <i>Biannual</i> )	Originally: 6 CariCOFs held; given project extension total target: 8 CariCOFs held	6 CARICOFs held	7 CariCOFS held	7 CariCOFS held
Multi-hazard early warning systems and impact-based forecasting introduced to target groups ( <i>Trainings/ Workshops</i> )	Originally: 3 regional training events on hurricane forecasting. Update June 2022: 1 regional training event, one international event, 1 learning module	1	Development of TORs started for Learning Module on Hurricane Forecasting (instead of face-to-face training)	Development of TORs started for Learning Module on Hurricane Forecasting (instead of face-to-face training)
	2 Regional Training events on Impact- based forecasting	1	No target for this reporting period.	No target for this reporting period.

Mapping the data environment for IBF in two countries (Guyana, and, Trinidad and Tobago). [aiming to contribute to living repositories of open-source national risk data]	2 Mapping the data environment for IBF	Activity not started.	2 mapping of sources of information for gathering available, accessible, up-to-date, and recurrent data that could be tailored for integrating impact information on early warning systems was developed	0

**Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points.**

Contribution to (selected) CREWS value propositions:

- *Gender responsive, people centered:* IRFF seeks to provide reliable information about floods especially to the most vulnerable groups. Depending on the content, trainings further include most vulnerable groups (e.g. women), users as well as providers and emphasize engagement of local organizations to ensure inclusion.
- *Promote coherence:* Most workshops (e.g. SWFP, Hurricane Forecasting, ...) are part of larger, cross-regional initiatives and as such contribute to coherence and regional capacity building. IRFF is a system established also with synergies with WMO system products such as SWFP, FFGS and CIFI.
- *Solution oriented:* The project seeks to find innovative approaches/best practices to substitute trainings that should be held face to face e.g. through the development of online training modules (as is the case for the topic “Messaging Tropical Cyclone Threats Before Formation” which shall substitute a face-to-face training) or webinars.

### CREWS Output(s) 3: Information and Communication Technology, including common alerting protocol, strengthened

State Project Output(s) in this section	Overall Project Target	Progress by December 2021	Target for the reporting period	Progress by June 2022
Weather mobile app to increase the accessibility and use of weather information available for Jamaica (“BReTCAT Project”)	<ul style="list-style-type: none"> <li>• SmartMet Server &amp; Workstation procured</li> <li>• Technical trainings &amp; assistance provided</li> <li>• Data updated (SmartMet to MSJ website &amp; app)</li> <li>• Support in forecast design in the localisation and configuration of the “Weather App”</li> <li>• Increase user-friendliness of MSJ webpage</li> </ul>	Procurement finalized, delays in delivery (expected Jan 2022)	<ul style="list-style-type: none"> <li>• SmartMet Server &amp; Workstation operational, related trainings held</li> <li>• Co-design workshops held to improve twice daily national forecasts and five-day MHEWS service forecasts</li> <li>• Template of improved twice-daily national forecast developed</li> </ul> <p>Overall delivery: 60%</p>	<ul style="list-style-type: none"> <li>• SmartMet Server &amp; Workstation operational, related trainings held</li> <li>• Co-design workshops held to improve twice daily national forecasts and five-day MHEWS service forecasts</li> <li>• Template of improved twice-daily national forecast developed</li> </ul> <p>Overall delivery: 60%</p>

**Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points.**

Contribution to (selected) CREWS value propositions:

- *Gender responsive, people centered:* The provision of a mobile App for weather information will improve and support a quick dissemination of warning alerts as basis for decision making in a way that is easy to understand and access, especially for most vulnerable groups. The forecast co-design process was further strongly focused on the weather information needs of women, as most households in informal settlements are single-parent families headed by a woman.
- *Solution oriented:* BRetCAT activities address critical gaps in the dissemination of warning [alerts](#) in a modern, solution-oriented, pragmatic manner.
- *Promote coherence:* The activity is part of a larger initiative undertaken between the Meteorological Service in Jamaica, the Finnish Meteorological Institute, UK Resurgence and the Caribbean Climate Innovation Centre. The initiative is further replicable in other Caribbean countries.

#### **CREWS Output(s) 4: Preparedness and response plans with operational procedures that outline early warning dissemination processes developed and accessible**

<b>State Project Output(s) in this section</b>	<b>Overall Project Target</b>	<b>Progress by December 2021</b>	<b>Target for the reporting period</b>	<b>Progress by June 2022</b>
Review and development of model for standing operational procedures (SOPs) and adaption to 4 countries. Test SOPs for relevance and appropriateness in the 4 countries and provide implementation support.	SOP model revised, adjusted & adapted to four countries	Consultant hired as of July 2021; inception report received	SOPs for Bahamas, Barbados, Antigua & Barbuda, Trinidad & Tobago developed/improved	SOPs for Bahamas, Barbados, Antigua & Barbuda, Trinidad & Tobago developed/improved
Community based flood management activities in Antigua.	5 face-to face & hybrid workshops, update of vulnerable houses and mapping lists,	Activity not started.	Inception workshop incl. community consultations held	Inception workshop incl. community consultations held

	installation of flood warnings, provision of 2 guidance documents/manuals			
Development of a Risk, EWS and IBF Perception Study in selected countries to be implemented in close coordination with the University of West Indies and the Red Cross.	A Perception Study developed	Activity not started.	1 risk perception dialogue between national and local authorities and local community developed	1 risk perception dialogue between national and local authorities and local community developed
<p><b>Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points.</b></p> <p>Contribution to (selected) CREWS value propositions:</p> <ul style="list-style-type: none"> <li>• <i>Gender responsive &amp; people centered:</i> Ensuring security of people and especially most vulnerable groups are the core reason why functional SOPs are needed. The activity supports a better collaboration between different actors in EWS and thus enhanced security in hazardous situations. Further, the integration of the gender dimension in all phases of climate risk prevention and management is essential. Hence, in Antigua a Gender Mainstreaming workshop will be held in September – guided by a training manual designed by the Associated Programme of Flood Management to guide practitioners and policy makers on how they can better integrate gender into the overall end to end early warning systems for flood forecasting and integrated flood risk management processes. By ensuring that all activities are focused on the self-help capability of the communities and their members, people centricity is promoted as well.</li> <li>• <i>Promote coherence:</i> The review, adjustment and harmonization of SOPs across four target countries promotes coherence and coordination for EWS in the region. It further helps building sustained institutional capacity by defining roles and responsibilities. The community based flood management activities are guided by the Associated Programme of Flood Management which ensures coherence and potential adaptability in other Caribbean countries as well.</li> </ul>				

## CREWS Output(s) 5: Knowledge products and awareness programmes on early warnings developed

State Project Output(s) in this section	Overall Project Target	Progress by December 2021	Target for the reporting period	Progress by June 2022
Awareness videos (Ocean Buoys and Coastal Inundation) adapted to Caribbean context & available in English, Spanish and Créole	9 Caribbean videos available in three languages	Video-production company contracted, translators identified	9 videos finalized and accessible on Youtube (see links in section 14)	9 videos finalized and accessible on Youtube (see links in section 14)
Mapping of existing national capacities for MHEWS developed and integrated in countries' Situational Analysis;	2 Countries' capacities mapping integrated in Situational Analysis	Activity not started.	14 Countries' capacities mapping integrated in Situational Analysis  1 already online	14 Countries' capacities mapping integrated in Situational Analysis  1 already online
Development of knowledge products to be part of the educational offer of Caribbean Universities'.	1 knowledge products developed	Activity not started.	A consultant in charge of the developed of a MOOC on IBF contracted.	A consultant in charge of the developed of a MOOC on IBF contracted.

**Additional information: briefly indicate the contributions, with concrete examples, to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list bullet points.**

Contribution to (selected) CREWS value propositions:



- *Gender responsive & people centered*: The videos specifically target most vulnerable groups and seek to change and educate behavior in the context of Marine hazards. Through providing videos in the most important languages in the Caribbean region, a broad audience can be reached.
- *Solution oriented & promote coherence*: The provision of awareness videos is a best practice which has been applied successfully in the Pacific (specifically Fiji). Through the provision of simple and pragmatic explanations and recommendations to a large target group, they further promote regional coherence and shared common knowledge.
- *People centered*: In coordination with the Tobago Emergency Management Agency, IRFC, and the Tobago Red Cross Society, a two days Risk Perception Dialogue was organized. The purpose of the activity was to increase understanding of risk and early warning systems perceptions of local and national institutions and communities so as to facilitate increased engagement and use of MHEWS by stakeholder and practitioners.

### CREWS Output(s) 6: Gender-sensitive training, capacity building programmes provided

State Project Output(s) in this section	Overall Project Target	Progress by December 2021	Target for the reporting period	Progress by June 2022
National workshops for 'gender and vulnerable groups in early warning system' training with regional strategy consultation implemented	3 national workshops	No activity	N/A	N/A
<p><b>Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). <u>Please list in bullet points.</u></b></p> <p>Comment Component 2: A regional training workshop on gender mainstreaming in End-to-End Early Warning System for Flood Forecasting and Integrated Flood Risk Management is planned to be held in Antigua in September 2022. For further information see Output 4.</p>				



### 11.2 Regional Output(s) (for Regional Projects)

<b>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</b>				
<b>State Project Output(s) in this section</b>	<b>Overall Project Target</b>	<b>Progress by December 2021</b>	<b>Target for the reporting period</b>	<b>Progress by June 2022</b>
Strategic roadmap on strengthening MHEWS	Development of a Regional MHEWS Roadmap	Draft fully reviewed and ready for peer review and editing by the WB. Summary of Economic Analysis and Preface to be included.	Final Draft produce and edited, and peer reviewed Summary of Economic Analysis and Preface already included.	Final Draft produce and edited (not internal peer review yet). Summary of Economic Analysis and Preface already included.
Assessment of socio-economic benefits of better hydromet services and EWS	Developed the complete economic analysis of regional MHEWS in the Caribbean.	Developed the complete economic analysis of regional MHEWS in the Caribbean.	Summary of the Economic analysis developed and included In the Roadmap	Summary of the Economic analysis developed and included In the Roadmap
Priority Activities implemented as pilots.	Set of Priority Activities implemented.	Rain Grid Priority Activity is under implementation  IBF Pilot agreed and is under implementation	Rain Grid Priority Activity is under implementation  IBF Pilot agreed and is under implementation	Rain Grid Priority Activity is under implementation  IBF Pilot agreed and is under implementation



		Two additional Priority Activities defined and agreed and will begin in February 2022	The technical analysis for the development of a regional emergency alert system under implementation.  An “integrated approach to flooding” action plan is being developed for Saint Lucia and Jamaica under implementation.	The technical analysis for the development of a regional emergency alert system under implementation.  An “integrated approach to flooding” action plan is being developed for Saint Lucia and Jamaica under implementation.
CIMH capacity in climatology and early warning marine products and services delivery to the region strengthened	<ul style="list-style-type: none"> <li>• CIMH supported through provision of funds</li> <li>• <b>Marine Services products developed</b></li> <li>• <b>Training for staff provided</b></li> </ul>	Implementing Arrangement with CIMH finalized	<b>No target for this reporting period.</b>	<b>No target for this reporting period.</b>
	2 meeting proceedings	Activity not started.	Preparations for the development of a REWSC member’s meeting launched.	Preparations for the development of a REWSC member’s meeting launched.

	1 knowledge products developed	Activity not started.	A Regional Workshop organized	A Caribbean Regional Workshop on Measuring Effectiveness of Early Warning Systems through Sendai Framework Target (g) and Custom Indicators developed
	Mapping of existing regional capacities for MHEWS	Activity not started.	A first preliminary version of a mapping of existing national and regional capacities for MHEWS developed	A first preliminary version of a mapping of existing national and regional capacities for MHEWS developed

**Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points.**

Contribution to (selected) CREWS value propositions:



- *Solution oriented and promotes coherence:* The strengthening of regional capacity in climatology and early warning marine products and thus the services delivery to the region promotes regional coherence.
- *Solution oriented and promotes coherence:* The strengthening of REWSC as a regional mechanism to serve as a strategic and advisory body for the advancement and strengthened coordination of Early Warning Systems within the Caribbean Region
- **Multiplier:** In line with the CREWS Global Project for Measuring MHEWS effectiveness, the “Caribbean Regional Workshop on Measuring Effectiveness of Early Warning Systems through Sendai Framework Target (g) and Custom Indicators” was held in Port of Spain, Trinidad and Tobago, 10-11 May 2022. It gathered 65 representatives of: National Disaster Management Offices; Regional and National Meteorological and Hydrological Services; and National Offices of Statistics of 22 Caribbean countries and overseas territories .

### 13. Certification on Use of Resources

This needs to be provided at the end of the year as part of the submission of the 2<sup>nd</sup> semester report. Each Implementing Partner to provide a certification of the use of resources signed by their authorized representative.

### 14. 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*
  - BReTCAT Project:
    - [Project underway to enhance weather communication in Jamaica - Jamaica Observer](#)
    - [JIS News-23.03.2022 - YouTube](#)
    - [Project To Enhance Weather Communication In Jamaica – Jamaica Information Service \(jis.gov.jm\)](#)
    - [Met Service Launches BReTCAT- March 28, 2022 – Jamaica Information Service \(jis.gov.jm\)](#)
  - Community Based Flood Management Activities – Antigua



1. Implementation of Community-based Approaches to Flood Management: [Implementation of Community-based Approaches to Flood Management | World Meteorological Organization \(wmo.int\)](#)
  2. LinkedIn Post – Inception Workshop Community Based Flood Management: [https://www.linkedin.com/posts/world-meteorological-organization\\_an-inception-workshop-took-place-today-on-activity-6930183748973936640-9u5y?utm\\_source=linkedin\\_share&utm\\_medium=member\\_desktop\\_web](https://www.linkedin.com/posts/world-meteorological-organization_an-inception-workshop-took-place-today-on-activity-6930183748973936640-9u5y?utm_source=linkedin_share&utm_medium=member_desktop_web)
- iii. Awareness Video Ocean Buoy:
1. English: [Ocean Buoy Awareness - Caribbean \(English\) - YouTube](#)
  2. Creole: [Ocean Buoy Awareness - Caribbean - \(Creole\) - YouTube](#)
  3. Spanish: [Ocean Buoy Awareness - Caribbean \(Spanish\) - YouTube](#)
- iv. Awareness Video Coastal Inundation
1. English: [Coastal Inundation Awareness - Caribbean – Hilly terrain \(English\) - YouTube](#)
  2. English: [Coastal Inundation Awareness – Caribbean – Low-lying landscape \(English\) - YouTube](#)
  3. Creole: [Coastal Inundation Awareness - Caribbean – Hilly terrain \(Creole\) - YouTube](#)
  4. Creole: [Coastal Inundation Awareness – Caribbean – Low-lying landscape \(Creole\) - YouTube](#)
  5. Spanish: [Coastal Inundation Awareness - Caribbean – Hilly terrain \(Spanish\) - YouTube](#)
  6. Spanish: [Coastal Inundation Awareness – Caribbean – Low-lying landscape \(Spanish\) - YouTube](#)
- v. Mapping of existing national capacities for MHEWS developed and integrated in countries’ Situational Analysis
1. [Disaster risk reduction in Saint Lucia: Situational analysis 2022](#)
- vi. CREWS commits additional funding to strengthen Early Warning Systems in the Caribbean
1. [Press release](#)
- vii. Caribbean Regional Workshop on Measuring Effectiveness of Early Warning Systems through Sendai Framework Target (g) and Custom Indicators'
1. [Press release](#)
- viii. Risk perception dialogue between national and local authorities and local community developed
1. [Press release](#)



## 15. Supporting documents

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

## 16. Project History

- a. *Highlight key achievements since project started in bullet points, include all visibility and supporting documents other than those from the last 12 months*

### Component 1:

- *Revised draft of the regional MHEWS roadmap has been produced and shared: Consultation process on going.*
- *Economic Analysis of MHEWS completed.*
- *EW Checklists with national gap analysis reports for Barbados, Trinidad and Tobago and Guyana completed.*

### Component 2:

- *Climate Change in the Caribbean Workshop held (December 2020)*
- *SWFDP needs assessment conducted/finalized*
- *2 Fellowships awarded and studies of both fellows finalized at the University of West Indies and University of Reading*
- *7 Caribbean Climate Outlook Forums (CariCOFs) held*
- *Model Meteorological Policy and Legislation finalized and endorsed by CMO members*
- *Adaptation of Model Policy and Legislation for 8 countries finalized; Belize & Grenada already under ministerial review.*
- *8 National Strategic Plans finalized; officially endorsed by Anguilla, Antigua & Barbuda, Dominica, Grenada, Guyana, Jamaica, St. Kitts & Nevis, SVG. Implementation ongoing.*
- *9 Awareness videos on Ocean Buoys and Coastal Inundation accessible on Youtube*

### Component 3:

- *Priority Activities (pilots) at implementation stage:*
  - ✓ *Multi-sensor precipitation grid under implementation (15-month contract signed)*
  - ✓ *Technical Study for a regional Emergency Alert System (contract ongoing)*
  - ✓ *Developed an outline of an IBF implementation plan, full IBF implementation plan and all accompanying technical webinars(ongoing)*
  - ✓ *Integrated approach to flooding pilot in Saint Lucia and Jamaica (ongoing)*