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Fourth (4th) Meeting of the Consortium of Regional Sectoral Early Warning Information Systems across Climate Timescales (EWISACTs) Coordination Partners



May 22-23, 2018
Accra Beach Hotel, Christ Church, Barbados

Meeting Report

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1. Introduction

1.1. Sectoral Early Warning Information Systems across Climate Timescales (EWISACTs)

Early Warning Systems (EWS) are recognized by the Regional Comprehensive Disaster Management (CDM) Strategy and Programming Framework 2014-2024 and the Implementation Plan for the 'Regional Framework for Achieving Development Resilient to Climate Change' as critical to the effective management of climate-related disasters and adaptation to climate variability and change (CVC). Climate variability occurs on timescales ranging from sub-seasonal to seasonal and interannual, while climate change occurs on timescales of decades and beyond - making it necessary to develop effective Early Warning Information Systems across Climate Timescales (EWISACTs). EWISACTs can improve the effectiveness and efficiency of sustainable planning, adaptation and mitigation strategies across major weather and climate-sensitive socio-economic sectors. If well aligned with priority sectors, sectoral EWISACTs can support regional growth resilient to climate risks.

1.2. The Consortium of Regional Sectoral EWISACTs Coordination Partners

Fully established in 2017 under the 3 year (2014-2017) United States Agency for International Development (USAID) funded Building Regional Climate Capacity in the Caribbean (BRCCC) Programme, the Consortium of Regional Sectoral EWISACTs Coordination Partners is a key mechanism to drive the co-design, co-development and co-delivery of tailored climate products and services in the agriculture and food security, disaster risk management, energy, health, tourism and water sectors in the Caribbean. Since 2015, the ad hoc meetings of the Consortium have provided an important opportunity for six lead regional technical sectoral agencies² as well as, regional observer organisations³ to raise sectoral and governance issues, positions and recommendations related to weather and climate in a cross-disciplinary context with the Caribbean Regional Climate Centre (RCC). These sessions facilitate the consultative and participatory processes necessary for successful joint EWISACTs development and implementation and are a key enabler of the significant strides made to date towards the development of Sectoral EWISACTs in the region.

² The Caribbean Agricultural Research & Development Institute (CARDI), the Caribbean Disaster Emergency Management Agency (CDEMA), the Caribbean Public Health Agency (CARPHA), the Caribbean Tourism Organization (CTO), the Caribbean Hotel & Tourism Association (CHTA), and the Caribbean Water and Wastewater Association (CWWA).

³ The CARICOM Secretariat, the Organisation of Eastern Caribbean States (OECS) Commission, the Caribbean Community Climate Change Centre, the Climate Studies Group at UWI Mona and the Pan American Health Organisation.

1.3. The Sectoral EWISACTs Roadmap and Plan of Action

A recent assessment of provider and end-user climate capacity in the Caribbean (Mahon & Trotman, 2018)⁴ revealed that there are several gaps on both the end-user and provider sides of the capacity spectrum across the five pillars⁵ of the Global Framework for Climate Services (GFCS)⁶ - the main source of guidance on climate services. The Sectoral EWISACTs Roadmap and Plan of Action (PoA) proposes to fill these gaps by articulating the main components of the Consortium's cross-agency portfolio of climate services initiatives for the period 2019-2028. The model will define the 10 year collective goal, outcomes, and outputs that guide the implementation of a coordinated, multi-sectoral climate services portfolio.

While prior versions of the working draft of the Roadmap benefitted from a bottom-up approach in which broad stakeholder input was harvested from over 130 sectoral stakeholders at the BRCCC Programme's Close-Out Meeting, as well as, the November 2017 Dry Season Caribbean Climate Outlook Forum, moving forward, there was a need to further advance the working draft of this key regional guiding document with the specific and targeted input of Consortium representatives.

1.4. The 4th Consortium Meeting

The Fourth (4th) Meeting of the Consortium of Regional Sectoral Early Warning Information Systems across Climate Timescales (EWISACTs) Coordination Partners was made possible through the *Enhancing Weather and Climate Early Warning Systems and Impacts-Based Forecasting Platforms in the Caribbean Project* funded from resources provided under the African Caribbean Pacific- European Union- Caribbean Development Bank Natural Disaster Risk Management (ACP-EU-CDB NDRM) in CARIFORUM Countries Programme. The two day meeting took place at the Accra Beach Hotel, Christ Church, Barbados on May 22-23, 2018 and was the first formal forum for the consideration and advancement of the draft Roadmap and PoA by the Consortium grouping. The specific objectives of the meeting were:

1. To report on progress to date on the development of sectoral EWISACTs;
2. To review and advance the draft shared Logic Model for the Sectoral EWISACTs Roadmap and Plan of Action for Caribbean Climate Services; and
3. To review and advance the draft Monitoring, Evaluation and Reporting (MER) framework of the Sectoral EWISACTs Roadmap and Plan of Action for Caribbean Climate Services.

⁴ This report can be accessed here: http://rcc.cimh.edu.bb/files/2018/06/Summary-Report_Provider-and-Enduser-capacity-assessment_Carib-climate-services.pdf

⁵ 1) Observations and Monitoring; 2) Research, Modelling and Prediction; 3) Climate Services Information System; 4) User Interface Platform; and 5) Capacity Development.

⁶ The GFCS was formulated by the World Meteorological Organization and its partners and is the main source of guidance on climate services.

A total of 19 participants attended the meeting over two days (see Appendix B). Participants included Consortium partners (CARDI, CWWA, CARPHA, CTO); key observer organisations such as the CARICOM Secretariat, the CCCCC, the PAHO, and the UWI CSGM; as well as other regional and national stakeholder organisations (the Energy Unit at the CARICOM Secretariat, CaFAN, the Barbados Meteorological Service, the Barbados Ministry of Health, the Barbados Department of Emergency Management, and the Barbados Water Authority).

The meeting was carried out according to the meeting agenda (see Appendix A). The meeting proceedings included presentations and guided discussions over four (4) sessions.

2. Day 1, Session 1: Looking back

2.1. Sectoral EWISACTs: Progress to date (Roché Mahon, CIMH)

Dr. Roché Mahon reported on progress made for the period December 2017-May 2018. Main achievements for the period included:

- A new Sectoral EWISACTs webpage (rcc.cimh.edu.bb/ewisacts) - a resource hub that houses key conceptual and implementation documents, research documents and hyperlinks to sector-specific climate bulletins, among other things;
- 3 new peer-reviewed publications:
 1. Ryan SJ, Carlson CJ, Stewart-Ibarra AM, Borbor-Cordova MJ, Romero MM, Cox S, Mahon R, Trotman A, St. Ville S, Ahmed S. (2017). Zika Virus Outbreak, Dominica, 2016. *Emerging Infectious Diseases*. 23(11). URL: https://wwwnc.cdc.gov/eid/article/23/11/17-1140_article
 2. Ryan SJ, Lippi CA, Carlson CJ, Stewart-Ibarra AM, Borbor-Cordova MJ, Romero MM, Cox S, Mahon R, Trotman A, Rollock L, Gittens-St. Hilaire M, King D, Daniel S. (2018). Zika Virus Outbreak, Barbados, 2015 – 2016. *The American Journal of Tropical Medicine and Hygiene* 98(6):1857-1859. URL: http://www.ajtmh.org/content/journals/10.4269/ajtmh.17-0978#html_fulltext
 3. Lowe R, Gasparrini A, Van Meerbeeck CJ, Lippi CA, Mahon R, Trotman AR, Rollock L, Hinds AQJ, Ryan SJ, Stewart-Ibarra AM (2018). Nonlinear and delayed impacts of climate on dengue risk in Barbados: A modelling study. *PLoS Med* 15(7): e1002613. <https://doi.org/10.1371/journal.pmed.1002613>. URL: <http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002613>
- Co-development and dissemination of the Quarterly Tourism Climatic Bulletin: Vol 2, Issue 1 (March-April-May 2018). URL: <http://rcc.cimh.edu.bb/caribbean-tourism-climatic-bulletin-vol-2-issue-1-march-2018/>;

- Co-development and dissemination of the Quarterly Health Climatic Bulletin: Vol 2, Issue 1 (March-April-May 2018). URL: <http://rcc.cimh.edu.bb/caribbean-health-climatic-bulletin-vol-2-issue-1-march-2018/>;
- Co-development and dissemination of the Monthly Agro-Climatic Bulletin: Vol 1, Issues 8-11. URL: <http://rcc.cimh.edu.bb/carisam-bulletin/>; and
- Updated copy of the draft Sectoral EWISACTs Roadmap and PoA 2018-2029.

2.2. Sectoral perspectives: Consortium partners reflect

In this session, Consortium partners were invited to share their reflections on 3 years of climate services partnership. Presentations were received from Lyndon Robertson of CARPHA, Candi Hosein of the CWWA and Rasheeda Hanson-Hall of CARDI.

Lyndon Robertson of CARPHA outlined several baseline challenges for the health sector with regard to climate services development including: limited awareness among health stakeholders on the extent of the connections between climate and health; the absence of suite of regionally applicable indicators for the generation of empirical evidence of the impacts of climate on health as well as limited capacity within CARPHA Member States to empirically determine the impacts of climate on health; a skewed emphasis on climate change and hydro-meteorological extreme events with slow onset events usually not considered; limited incorporation of climate factors into health sector planning as well as limited application of climate services for improved resilience in the health sector. Mr. Robertson emphasised that the EWISACTS process has helped to highlight the need for a wider regional effort focusing on climate and health. In particular, the emerging research and development process for a climate-driven spatio-temporal modelling framework for *Aedes aegypti* borne diseases spearheaded by the CIMH and its health partners has made clear that there is a need for closer linkages between environmental and epidemiological data; and that data collection has to be revised in many countries to allow for more robust data sets that will contribute to early warning systems and evidence based decisions. Continued collaboration on current investments in regional public goods is expected, particularly related to the operational development and dissemination of the Caribbean Health Climatic Bulletin - a joint initiative between the health and climate communities; the work of CARPHA's Expert Panel on Climate Change and Health; as well as, key regional guiding assessment documents including CARPHA's States of Public Health Report 2017: Climate Change and Health. The CARPHA representative indicated that there will be increased emphasis on climate and health in CARPHA Member States going forward and expressed optimism that the current dengue early warning system research undertaken by SUNY, CIMH, CARPHA and others has the potential for expansion to other areas beyond the mosquito vector. He called for support for improved surveillance systems that support the type of data that feed into early warning systems, further investigation into the use of the SUNY model for expanded early warning systems in the health sector, as well as, increased promotion of the use of the emergent dengue early warning information system within the health sector through use additional country case studies.

Candi Hosein of the CWWA emphasised that a key baseline challenge for the water sector was that climate data/information still remained tangential to sector development. In fact, according to the CWWA representative water utility and water resources agencies have historically been slow to mainstream climate services into their planning cycles (agencies are more reactive than pro-active) perhaps because of a lack of capacity at the institutional level to integrate climate information. Ms. Hosein highlighted a current initiative to develop a Strategic Action Plan (SAP) for Governance and Building Climate Resilience in the Water Sector (supported by the IDB/CDB/CWWA) which is expected to be completed in October 2018 and used as the basis for investment in sector. Going forward, Ms. Hosein recommended that capacity building activities should provide more practical methods of integrating climate information; and that the water sector be supported to craft appropriate climate related messages for sectors impacted by water (e.g. health, tourism, agriculture, and the general public).

Rasheeda Hanson-Hall of CARDI highlighted that a key baseline challenge for the agriculture sector is insufficient monitoring of the use of climate services. This is seen as a barrier since more efficient monitoring will allow for integration of critical feedback from users regarding the usefulness of the information and what can be done to improve the usefulness of climate information products. Acknowledging that early warning systems are important in helping to secure the sector from climate hazards, she stressed the need going forward, to effectively monitor the use of climate services to learn from stakeholders how best we can assist them with their climate issues, as well as, to strengthen the involvement of other stakeholders (such as agricultural extension service officers and affiliated agencies including NGOs) in the use and dissemination of climate services. The CARDI representative further recommended that an effort be made to report on the results of the utilisation of climate services (such as reduced agricultural loss/improved agricultural production).

Full partner presentations can be accessed here:

<https://owncloud.cimh.edu.bb/index.php/s/1WHGd220ulgvNCC>

3. Day 1, Session 2: Looking forward

3.1. Presentation of Draft Shared Logic Model: Sectoral EWISACTs Roadmap and Plan of Action (Roché Mahon, CIMH)

Dr. Mahon introduced this presentation by giving an overview of the multi-phase participatory process underpinning the development of the Sectoral EWISACTs Roadmap and PoA. She highlighted that in each phase of the process of developing the Roadmap and Plan of Action – CIMH has integrated research insights from the user and provider assessments collected between 2015/2016. It is these insights that inform the Caribbean's baseline on needs and gaps and underpins all future interventions. After reviewing the results of the user and provider assessments, Dr. Mahon showcased a high level view of the Roadmap draft including its Goal of

“Increased climate resilience of sectoral infrastructure, activities and outcomes”, as well as its 4 Outcome Areas of:

1. Strengthened institutional context for climate risk management at regional, national and sectoral scales;
2. Harmonised climate and sectoral information production systems across climate timescales;
3. Increased generation of tailored, sector-specific climate information at regional and national scales; and
4. Improved sectoral decision-making for climate risk management at regional and national scales.

Dr. Mahon then invited meeting participants to form national and regional working groups to complete the following tasks:

1. Sections 2-7: To critique & augment current draft content;
2. Sections 8 & 9:
 1. To rationalise and select capacity and other gaps that will be addressed in the 10 year implementation period;
 2. To map Outputs that address existing strategic and operational gaps to Outcome Areas within the 10 year implementation period;
 3. To identify appropriate indicators at the Outcome and Output levels (taking into consideration differences in scale);
 4. To identify appropriate targets over time for the implementation of outputs.

Figure 1 illustrates one group at work.



Figure 1. The regional stakeholder Working Group deliberates the Sectoral EWISACTs Roadmap and Plan of Action for Caribbean Climate Services 2019-2028

4. Day 2, Session 3: Measuring results

The meeting contributed to increasing the engagement of regional and national stakeholders from six climate-sensitive sectors in the co-development of a consensus-based strategic inter-institutional Sectoral EWISACTs Roadmap and Plan of Action for Caribbean Climate Services. However, due to time constraints, not much progress was made on advancing an associated Monitoring, Evaluation and Reporting (MER) framework. This was primarily because of the demanding nature of fulfilling the core tasks associated with reviewing and advancing the draft shared Logic Model for the Sectoral EWISACTs Roadmap and Plan of Action for Caribbean Climate Services (meeting objective 2). CIMH committed to advancing a draft of the MER framework based on the revised and augmented outputs identified by Consortium representatives at the 4th Consortium meeting in preparation for the next meeting of Consortium partners.

5. Day 2, Session 4: Institutional arrangements and resourcing

Similarly, due to time constraints, the planned Consortium discussion on institutional arrangements and resourcing was not conducted. All session segments on Day 2 focused on the Consortium deliberating, formulating and/or validating the content of the working draft's goal, outcomes and outputs (see Figure 2).



Figure 2. Plenary discussion of synthesised national and regional Working Group recommendations

CIMH committed to proposing and mapping possible sources of funding for Roadmap outputs identified by Consortium representatives at the 4th Consortium meeting for review and discussion at the 5th Consortium Meeting scheduled for November 2018.

6. Day 2, Way Forward and Close (Adrian Trotman, CIMH)

Chair of the meeting, Mr. Adrian Trotman reiterated the next steps arising from the meeting as follows:

Ref.	Item	Responsibility
1.	CIMH to further synthesise and polish the working draft for presentation to the 2018 Wet/Hurricane Season CariCOF on May 25, 2018	CIMH
2.	CIMH to share the next iteration of the draft (with CariCOF inputs and a proposed associated draft MER framework, as well as proposed resourcing) for further review by Consortium partners before the next Consortium meeting	CIMH

Mr. Trotman closed the meeting by thanking everyone for their continued support to the Sectoral EWISACTs development process, and particularly to the long-term Sectoral EWISACTs Roadmap for Climate Services.

7. Conclusion

In accordance with its objectives, the 4th Meeting of the Consortium reported on progress to date on the development of sectoral EWISACTs and also facilitated a detailed review and consensus-based advancement of the draft inter-institutional Logic Model for the Sectoral EWISACTs Roadmap and Plan of Action for Caribbean Climate Services 2019-2028. Due to time constraints, not much progress was made on advancing an associated MER framework. Similarly, due to time constraints, the planned Consortium discussion on institutional arrangements and resourcing was not conducted. Importantly, the 4th Consortium meeting preceded the 2018 Wet/Hurricane Season Caribbean Climate Outlook Forum (CariCOF) which continued to build consensus with multiple national-level practitioner communities around the updated draft of the Climate Services Roadmap and Plan of Action for the Caribbean emerging from the 4th Consortium Meeting. CIMH committed to further synthesising, polishing and sharing the next iteration of the draft with CariCOF inputs, and a proposed associated draft MER Framework, as well as, proposed resourcing for further review by Consortium partners before the next Consortium meeting.

All available meeting outputs including: 1) all presentations made at the 4th Consortium meeting; and 2) an augmented and revised draft of the 10 year Sectoral EWISACTs Roadmap

and Plan of Action for Caribbean Climate Services 2019-2028 can be downloaded at the following link: <https://owncloud.cimh.edu.bb/index.php/s/sDXvrXVU7IW9hFS>

APPENDIX A: Meeting Agenda

Fourth (4th) Meeting of the Consortium of Regional Sectoral Early Warning Information Systems across Climate Timescales (EWISACTs) Coordination Partners

AGENDA

Accra Beach Hotel
Christ Church, Barbados

May 22-23, 2018

MEETING OBJECTIVES:

1. To report on progress to date on the development of sectoral EWISACTs;
2. To review and advance the draft shared Logic Model for the Sectoral EWISACTs Roadmap and Plan of Action for Caribbean Climate Services; and
3. To review and advance the draft Monitoring, Evaluation and Reporting (MER) framework of the Sectoral EWISACTs Roadmap and Plan of Action for Caribbean Climate Services.

MEETING AGENDA:

Day 1: Tuesday, 22 May 2018

TIME	SESSION		RESOURCE PERSON/AGENCY
0900 - 0930	Arrival and registration		All
0930 - 0940	Welcome remarks		Adrian Trotman, CIMH
0940 - 1000	Icebreaker – What does the Consortium mean to you?		Roché Mahon, CIMH/Jodi-Ann Petrie, PPCR
1000 - 1030	Session 1: Looking back	Sectoral EWISACTs: Progress to date	Roché Mahon, CIMH
1030 - 1100		Sectoral perspectives: Consortium partners reflect	CARDI, CWWA, CARPHA, CDEMA, CTO/CHTA
	WORKING COFFEE BREAK		
1100 - 1115	Session 2: Looking forward	Presentation of Draft Shared Logic Model: Sectoral EWISACTs Roadmap and Plan of Action	Roché Mahon, CIMH
1115 - 1230		Working group session (review and editing of master document)	All
1230 - 1330	LUNCH BREAK		
1330 - 1530	Session 2: Looking forward (Continued)	Working group session (review and editing of master document)	All
		WORKING COFFEE BREAK	
1530 - 1615		Plenary presentations	All
1615 - 1630		Summary and Close	Adrian Trotman/Roché Mahon, CIMH

Day 2: Wednesday, 23 May 2018

TIME	SESSION		RESOURCE PERSON/AGENCY
0830 - 0900	Arrival and Networking		All
0900 - 0915	Recap of Day 1 and intro to Day 2 sessions		Adrian Trotman/ Roché Mahon, CIMH
0915 - 0930	Session 2: Looking forward (Continued)	Plenary review and editing of master document	All
0930 - 1030			
1030 - 1045	COFFEE BREAK		
1045 - 1130	Session 3: Measuring results	Presentation of Draft Monitoring, Evaluation and Reporting (MER) Framework	Roché Mahon, CIMH
1130 - 1230		Working group session (review and editing of master document)	All
1230 - 1330	LUNCH		
1330 - 1430	Session 4: Institutional arrangements and resourcing	Working group session (review and editing of master document)	All
		WORKING COFFEE BREAK	
1430 - 1500		Plenary presentations	All
1500 - 1615		Discussion on institutional arrangements and resourcing	All
1615 - 1630		Way Forward and Close	Adrian Trotman, CIMH

APPENDIX B: Participant List

Ref.	Organisation	Last name	First name	Email contact
1.	CTO	Pemberton	Kennedy	pembertonk@caribtourism.com
2.	CARDI	Hall-Hanson	Rasheeda	rhanson@cardi.org
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4.	CARPHA	Robertson	Lyndon	robertly@carpha.org
5.	CCCCC	Jones	Albert	ajones@caribbeanclimate.bz
6.	CCREEE	Gardner	Devon	Devon.Gardner@Caricom.org
7.	CMO	DeSouza	Glendell	gde_souza@cmo.org.tt
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9.	CWWA	Hosein	Candi	chosein@cwwa.net
10.	CaFAN	Thompson	Errington	eit65@hotmail.com
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17.	CIMH	Trotman	Adrian	atrotman@cimh.edu.bb
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19.	PPCR Consultant at CIMH	Petrie	Jodi-Ann	jpetrie@cimh.edu.bb