Environment and Climate Change Canada | Environnement et Changement climatique Canada

The Jamaica In-Country Workshop:

Mapping Provider Capacity and User Needs for Climate Services

WORKSHOP REPORT

The Knutsford Court Hotel
New Kingston, Jamaica
December 13th, 2016

Prepared by Shelly-Ann Cox, Kareen Gourzong, Roché Mahon and Cédric Van Meerbeeck

The Jamaica In-Country Workshop:
Mapping provider capacity and user needs for climate services

Tuesday, December 13th, 2016
The Knutsford Court Hotel
New Kingston, Jamaica

1. INTRODUCTION

The final in-country workshop for mapping provider capacity and user needs in the five-country series was held in Jamaica at the Knutsford Court Hotel, on December 13th, 2016. This meeting provided an opportunity for cross-sectoral dialogue between the Meteorological Service of Jamaica (MSJ) and stakeholders from climate-sensitive sectors in Jamaica. It also advanced discussions around the formation of a national governance mechanism for the provision of climate services.

The objectives of the meeting were:

1. To familiarise country representatives with the Caribbean's programmatic approach to the design, development and delivery of user oriented climate information;

2. To share the preliminary results of an assessment of provider capacity for the delivery of climate services in Jamaica and the wider Caribbean;

3. To assess sectoral needs in Jamaica for climate information and services, as well as, capacity needs to ingest and respond to climate information; and

4. To begin to strategise for the formation of a National Sectoral Early Warning Information Systems across Climate Timescales (EWISACTs) Committee (NSEC).

The meeting was carried out according to the meeting agenda (see Appendix A). The meeting proceedings included presentations and guided discussions over five (5) sessions. Sessions 1-3 focused on raising the awareness of climate products and services provided at the regional and national levels. Session 4 baselined user needs for climate information while Session 5 mapped the way forward through a discussion about existing options for strengthening national governance of the climate services agenda.

A total of 28 participants attended the meeting (see Appendix B). Stakeholders across a number of sectors were represented, including Agriculture, Water, Tourism and Fisheries. The Caribbean Institute for Meteorology and Hydrology (CIMH) assisted the MSJ in facilitating the workshop and was represented in person by Dr. Shelly-Ann Cox. Dr. Cédric Van Meerbeeck joined remotely.

2. WELCOME AND OPENING REMARKS

Mr. Evan Thompson, Director of the Meteorological Service of Jamaica, gave the welcome and opening remarks. He began by welcoming everyone present and thanked them for their attendance. He emphasised the importance of the meeting in raising the awareness of stakeholders to the climate products and services produced at the regional and national levels. He also outlined that it was imperative that the needs of sectors for climate information and their capacity to interpret the information are assessed. He closed by stating that he anticipated a successful outcome of the meeting and how it would contribute to mapping the way forward for climate service co-production in Jamaica.

3. SESSION 1 - International, Regional and National Context of Climate Services - Chair: Mrs. Kareen Gourzong | Presenters: Dr. Cédric Van Meerbeeck and Dr. Shelly-Ann Cox (CIMH)

Dr. Cédric Van Meerbeeck, Climatologist at CIMH, gave an overview of the Global Framework for Climate Services (GFCS). He highlighted the Five Pillars of the GFCS: (1) User Interface Platform, where discussion takes place to identify and solve problems from data and information stored in, (2) Climate Services Information Systems, which were collated via, (3) Observations and Monitoring, as well as, (4) Research, Modelling and Prediction. He stated that Pillar (5), Capacity Development, was meant to be the foundation of the GFCS implementation plan that linked and supported the four other pillars to provide climate information and services from months, years and decades to solve problems from the global scale to local and community level. Dr. Van Meerbeeck pointed out that a major challenge in providing climate services was in translating what is a good climate outlook output from the science side to appropriate user information for sectoral decision-makers. He stated that, to support effective, evidence-based decision making within a socio-economic sector, the delivery of climate information needs to be tailored to the sector and should include likely impacts and information on how to respond. Dr. Van Meerbeeck then highlighted climate information and products generated at the CIMH, in many cases, in collaboration with the National Meteorological and Hydrological Services (NMHSs) of the region.

Dr. Cox, Post-Doctoral Researcher at CIMH, informed that the CIMH has developed a six-step methodological approach towards the development of sectoral Early Warning Information Services Across Climate Timescales (EWISACTs). This approach was initialised in January 2015; steps one and two involve establishing governance mechanisms, and baselining and monitoring sectoral needs and capacity respectively. Step three deals with improving existing sector specific impact prediction. Step four deals with co-developing, testing and validating climate products, while step five is concerned with the integration of products within decision support systems. Finally, step six strengthens both the NMHS's capacity to provide and the user's capacity to absorb and utilize climate information. Dr. Cox illustrated that steps one and two resulted in a Consortium of Caribbean sectoral agencies whose purpose is to work in tandem with national institutions to deliver climate products. This Consortium comprises of the Caribbean Disaster Emergency Management Agency (CDEMA) (Disaster Risk Management); the Caribbean Agriculture Research and Development Institute (CARDI) (Agriculture); the Caribbean Water and Wastewater Association (CWWA) (Water); the Caribbean Public Health Agency (CARPHA) (Health);

the Caribbean Hotel and Tourism Association (CHTA) and the Caribbean Tourism Organization (CTO) in a joint partnership (Tourism) and the Caribbean Centre for Renewable Energy and Energy Efficiency (CCREEE) (which was recently inaugurated to deal with sustainable energy issues and activities in the region).

3.1 SESSION 1 - Climate Service Delivery in Jamaica: Then, Now, Future - Presenter: Mr. Glenroy Brown (MSJ)

Mr. Glenroy Brown began his presentation by explaining the concepts of weather and climate, highlighting the difference in timescales. He set the context of the presentation by highlighting the importance of weather forecasts, especially to the airline industry. He continued by outlining the value of weather and climate information for construction, road and drain design. He also outlined the importance of astronomical data including moon phases, tide data and, Sunrise and Sunset.

Mr. Brown stated that knowing information about what is the norm (climatology) can also help to inform decision making. He mentioned the fact that farmers implement measures based on knowing the rainfall patterns and timing of the hurricane and dry seasons. He outlined that increasingly, changes to these patterns were seen, in that, more frequent storms with greater intensity and more severe droughts and bushfires were being experienced. This was the impetus for the MSJ to answer questions about why the norm was changing and what should be the response.

This response warranted the need to expand the observation data network both spatially, as well as, the type of parameters measured. Forecasting on longer time scales for drought, rainfall and even temperature was seen as necessary to address the growing problems. This effort has resulted in the production of climate smart tools allowing farmers to get rainfall and temperature forecasts 3-6 months in advance.

Mr. Brown presented the climate products developed by the Met Service, highlighting those issued to farmers and agricultural stakeholders in Jamaica. He informed the meeting about the successful uptake of those tailored products and the importance of Farmer's forums in helping farmers to interpret the information. He outlined how the climate products were currently disseminated to sector stakeholders. Several platforms are being used including mailing lists, web portals, social media and text messages.

Mr. Brown also outlined new products currently offered by the MSJ which include, Drought Monitoring and forecasting products using the Standardized Precipitation Index (SPI), a Monthly Farmers' Bulletin, 3D interactive maps to illustrate the Seasonal Drought Forecast, and the Community Forecast Tool. He also provided an update on the products that were in development. These include the Early Warning Bushfire Index and Heat stress (feel like temperatures) product.

3.2 SESSION 1 - DISCUSSION

Mrs. Kareen Gourzong, MSJ, facilitated the discussion in Session 1. She encouraged participants to pose questions to the presenters and suggest what should be the next range of products.

National Environment and Planning Agency (NEPA): Raised that air pollution is problematic and recommended that an event forecast particularly a dust forecast would be useful.

Fisheries Division: Stated that there is a need for greater coordination with the MSJ as there is a significant gap. There is a significant need for monitoring data; a need and role for long-term data to inform how extreme weather events will impact fisheries in the nearshore; as well as, to provide information on coral eco-systems as it relates to climate change impacts.

Question: How do you currently use the information from the Met Office?

Rural Agricultural Development Authority (RADA): Stated that the regional outlook is used mostly [to see] if the year will be normal. This outlook informs water management practices, pests and diseases and disaster risk management. Suggested that there be a discussion regarding the irish potato programme development particularly with respect to influence of weather patterns on production.

Question: Would information provided in climate/seasonal forecasts be useful for your operations?

National Works Agency (NWA): Stated that seasonal climate information would be useful yes, but would not likely be used because operations are governed by the availability of funds.

Question: Who should lead the charge to take the message to management (NWA) about usefulness of information? Should it be the MSJ?

NWA: Suggested that a collaborative effort is best from both the MSJ and the participants. Added that the action should be driven by the MSJ.

4. SESSION 2 - CIMH Early Warning Information Products: An Overview - Chair: Dr. Shelly-Ann Cox | Presenter: Dr. Cédric Van Meerbeeck (CIMH)

Dr. Van Meerbeeck introduced the range of climate products issued by the CIMH and their usefulness to specific audiences by means of an update on the climate conditions and their impacts or implications for the latest and the coming few months. He highlighted part of the CIMH product range, mainly focusing on those provided by the Caribbean Regional Climate Centre (in Demonstration Phase), including:

- Communication Products (CariCOF Caribbean Climate Outlook Newsletter, Caribbean Drought Bulletin, Caribbean Agroclimatic Bulletin, Caribbean Coral Reef Watch, excerpts of some national bulletins);
- Technical Tools (Monthly Weather Summaries, Caribbean Climate Database, Caribbean DEWETRA Platform, CariCOF Outlook Generator (CAROGEN)); and
- Technical Products (Mean Temperature Monitor, CariCOF Precipitation Outlook, CariCOF Minimum, Mean and Maximum Temperature Outlooks CariCOF Drought Outlook, CariCOF Wet Days and Wet Spells Outlook).

Dr. Van Meerbeeck then presented on the sectoral application of climate products and services and called for more users to be innovative in assessing their needs and for the climate products issued to be relevant.

5. SESSION 3 - ENSO and Jamaica's Rainfall - Mr. Sheldon Grant (MSJ)

Mr. Sheldon Grant presented on the El Niño Southern Oscillation (ENSO) and Jamaica's rainfall. He emphasized the importance of understanding how the ENSO affects the rainfall regime. Mr. Grant continued by highlighting drought related impacts including the implementation of water restrictions in Jamaica. He also outlined that sea surface temperatures (SSTs), in the NINO3.4 region of the equatorial Pacific Ocean, reached a record high in 2015. This was as a result of the 2015-2016 event which was in the top 6 extreme El Niño events. Mr. Grant explained the ENSO phenomenon and how it was monitored before outlining the link with Jamaica's rainfall.

He outlined that there was in fact a correlation between ENSO and Jamaica's rainfall. In El Niño years there is suppressed rainfall, a pronounced Caribbean Low Level Jet and a low number of major hurricanes. ENSO also has an effect on early season rainfall in El Nino + 1 year (the year after the start of El Niño). This is a key period for increased rainfall that starts between April and June. Subsequent years usually have a lower overall rainfall regime total than the El Nino + 1 year.

He closed by offering recommendations for understanding the ENSO phenomenon, which included research and capacity building.

6. SESSION 4 - Baselining Provider Capacity and User Needs

In her introductory remarks, Dr. Shelly-Ann Cox noted that knowledge regarding end-user needs is not presently empirically robust and there are insufficient baselines to inform product tailoring and development for climate sensitive sectors. Dr. Cox then facilitated participants to complete the Caribbean Climate Services User Baseline Survey. Fourteen (14) questionnaires were completed during this session.

7. SESSION 5 - WAY FORWARD

Dr. Shelly-Ann Cox, facilitated participants in a discussion on the options and opportunities for national governance of the climate services agenda in Jamaica. In her brief introductory presentation, she highlighted that the goal of working towards the early establishment of a representative stakeholder governance mechanism was to foster joint provider and user ownership of the climate services process. She identified 3 possible governance mechanisms for participants to further consider:

- Option 1: National Climate Change Committee (NCCC)
- Option 2: National Disaster Management Committee (NDMC)
- Option 3: National Sectoral EWISACTs Committee (NSEC)

She highlighted lessons from similar governance processes that were being established at the national levels in Barbados and Trinidad and Tobago, as well as, lessons from establishing a regional level governance mechanism in the form of the Consortium of Regional Sectoral EWISACTs Coordination Partners.

Dr. Orville Grey from the National Climate Change Committee (NCCC) gave an overview of the existing structure and membership of the committee which includes representatives from different sectors, Academia and NGOs. He continued by outlining that the structure was made up of an advisory board and the climate change focal point network. Meetings were held quarterly and on an ad hoc basis when necessary. The discussion that followed offered recommendations for using the NCCC as the governance mechanism for advancing the climate services agenda.

It was acknowledged that the MSJ will have a greater role to play on the NCCC in spearheading the production of climate products and services tailored to sectoral needs. In particular, the meeting recommended that the Climate Branch of the MSJ should conduct follow-up focus group sessions with the different sectors represented at the Workshop to document needs more specifically with the intention of designing or refining climate services and products.

8. SESSION 5 - CLOSE

Ms. Jacqueline Spence, Head of the Climate Branch at MSJ, gave the closing remarks and vote of thanks. She remarked that the workshop gave plenty food for thought and that the MSJ will continue to engage the sectors represented. Ms. Spence expressed her thanks to the CIMH for their continued support. She also thanked the staff of MSJ for their assistance in making the meeting a success. Finally, she expressed her gratitude to the meeting attendees for their participation and wished everyone Season's Greetings. The meeting ended at 5:15 pm.

9. APPENDIX A - AGENDA

TIME	SESSION		RESOURCE AGENCY/PERSON
9:00 – 9:30	Arrival and registration		All
9:30 – 9:35	Welcome remarks		Evan Thompson (MSJ)
9:35 – 9:45	Introduction of participants/Icebreaker		(MSJ and CIMH)
9:45 – 10:05	**<u>Session 1</u> International, regional and national context of climate services** (Chair: Kareen Gourzong, MSJ)	The GFCS and the Caribbean RCC approach to the delivery of user-oriented climate information, products and services	Cédric Van Meerbeeck & Shelly-Ann Cox (CIMH)
10:05 - 10:35		Climate Service Delivery in Jamaica: Then, Now, Future.	Glenroy Brown (MSJ)
10:35 – 10:45		Discussion	All
10:45 – 11:00	**COFFEE BREAK**		
11:00 - 11:20	**<u>Session 2</u> Sectoral applications of Climate Information**	CIMH Early Warning Information Products: An Overview (with examples of regional and national level use)	Cédric Van Meerbeeck (CIMH)

TIME	SESSION		RESOURCE AGENCY/PERSON
11:20 – 11:40	**Products and Services** (Chair: Shelly-Ann Cox CIMH)	The Use of Climate Early Warning Information in climate sensitive sectors: - Agriculture & Food Security - Water Sector - Health	
11:40 – 11:50		Discussion	All
11:50 – 12:05	**<u>Session 3</u> ENSO and Early Warning** (Chair: Kareen Gourzong, MSJ)	ENSO and Jamaica's Rainfall	Sheldon Grant (MSJ)
12:05 – 12:25		Discussion on on-going and expected climate impacts	All
12:25 – 12:45		Reporting out on User Driven Early Warning Information solutions	All
12:45 – 1:45	**LUNCH**		
1:45 – 2:35	**<u>Session 4</u> Baselining provider capacity and user needs** (Chair: Shelly-Ann Cox CIMH)	Baselining User Needs - Data Collection Session	All
2:35 – 2:50		Provider capacity to satisfy user needs for climate services in the Caribbean: A Preliminary Baseline	Shelly-Ann Cox (CIMH)

TIME	SESSION		RESOURCE AGENCY/PERSON
		Assessment	
2:50 – 3:00		Discussion	All
3:00 – 3:10	**Coffee break**		
3:10 – 3:55	**<u>Session 5</u>** **Way Forward** (Chair: Shelly-Ann Cox CIMH)	Discussion on options for strengthening national governance of the climate services agenda	All
3:55 – 4:00		Close	MSJ and CIMH

APPENDIX B – PARTICIPANTS LIST

	NAME	ORGANISATION	EMAIL	Contact Number
1.	Matti Eerikainen	FMI	matti.eerikainen@fmi.fi	358407035434
2.	Jaakko Nuottokari	FMI	jaakko.nuottokari@fmi.fi	-
3.	Deborah Henry-Myers	Banana Board	Hendeb34@hotmail.com	420-1686/422-2083
4.	Peter Mullings	JTB	pmullings@visitjamaica.com	905-9282
5.	Orville Grey	CCD	orville.grey@magic.gov.ja	633-7353
6.	Denise Lewis	Portland Municipal Corporation	disasteroffice@yahoo.com	993-2665/2705 841-0097
7.	Glenroy Brown	Met. Service (MSJ)	g.brown@metservice.gov.jm	357-4744
8.	Tiffany Hedge	Coffee Industry Board	thedge@ciboj.org	298-9278
9.	Amanda Chin	NWA	amandachin@nwa.gov.jm	407-6897
10.	Howard Prendergast	NWA	howardprendergast@nwa.gov.jm	386-3930
11.	Dianne Dormer	Ja REEACH	ddormer@jareeach.org	878-6951
12.	Shanice Bedward	Met. Service (MSJ)	sbedward@metservice.gov.jm	252-6301
13.	Adrian Shaw	Met. Service (MSJ)	ashaw@metservice.gov.jm	562-3017
14.	Kirk Freckleton	NIC	kirkf@nicjamaica.com	467-3926
15.	Rasheeda Hall-Hanson	CARDI	rasheeda.hall@gmail.com	927-1231
16.	Kareen Gourzong	Met. Service (MSJ)	kgourzong@metservice.gov.jm	357-4996
17.	Osbourne Chin	Ministry of Tourism	osbourne.chin@mot.gov.jm	470-8425
18.	Ronald Moody	Met. Service	rmoody@metservice.gov.jm	929-3700
19.	Shelly-Ann Cox	CIMH	scox@cimh.edu.bb	246-230-6579
20.	Dave McLaughlin	Jamaica Fire Brigade (JFB)	-	469-0632
21.	Lorenzo Lewin	Met. Service (MSJ)	l.lewin@metservice.gov.jm	804-6046
22.	Ricardo Hibbert	Jamaica Fire Brigade (JFB)	rickyhibby@yahoo.com	857-3671
23.	David Pott			
24	Byron Lawrence	Jamaica Dairy Development Board (JDDB)	bh.lawrence@yahoo.com	276-9356
25.	Steve Hudson	Water Resources Authority	steve_dale62@hotmail.com	402-3395
26.	Sheldon Grant	Met. Service (MSJ)	s.grant@metservice.gov.jm	316-1591
27.	Marina Young	RADA	executive@rada.gov.jm youngm@rada.gov.jm	468-7079
28.	G A. Korey	Fisheries Division	gakorey@mic.gov.jm	
29.	Romayne Robinson	Met. Service (MSJ)	r.robinson@metservice.gov.jm	