













The Programme for Building Regional Climate Capacity in the Caribbean (BRCCC Programme)

Component 4.1: Development of the Regional Climate Centre (RCC)

Technical Area III: Development of Seasonal Forecasting Capabilities to apply to Climate-Sensitive

Sectors in the Caribbean

# TERMS OF REFERENCE FOR THE CONSORTIUM OF REGIONAL SECTORAL EARLY WARNING INFORMATION SYSTEMS ACROSS CLIMATE TIMESCALES (EWISACTS) COORDINATION PARTNERS

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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)

The Caribbean Water and Wastewater Association (CWWA)

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#### 1. BACKGROUND

# 1.1. The Programme for Building Regional Climate Capacity in the Caribbean (BRCCC Programme)

The impacts of climate variability and change pose a serious threat to the social and economic development of the Caribbean region. These impacts include damage and loss associated with changing weather and precipitation patterns, more frequent and intense storms, more frequent and intense flooding and drought; sea level rise that is accelerating coastal erosion and threatening infrastructure; saltwater intrusion to coastal aquifers that threatens freshwater supplies; and increased air and sea surface temperatures that influence hurricane severity. These impacts are projected to be exacerbated in the coming years, threatening infrastructure, energy production, economic activity, agricultural productivity, coastal ecosystems and reefs, fisheries, industrial production, urban and rural development, community livelihoods and well-being.

The Programme for Building Regional Climate Capacity in the Caribbean (BRCCC Programme) funded by the generous support of the American people through the United States Agency for International Development (USAID), executed by the World Meteorological Organization and implemented by the Caribbean Institute for Meteorology and Hydrology (CIMH); aims to assist the CIMH in building its institutional capacity and infrastructure to deliver climate products and services to climate sensitive sectors in the Caribbean region as part of its goal to become the WMO Regional Climate Centre (RCC) for the Caribbean. More importantly and in combination with achieving the goal of CIMH being an RCC, the BRCCC Programme also seeks to address the constraints outlined above.

The support being provided by the USAID are to strengthen the CIMH to support its ability through:

- 1. Supporting institutional enhancements;
- 2. Increasing the range of products and services delivered to stakeholders;
- 3. Enhancing human and technical capacities at the CIMH and in National Meteorological and Hydrological Services (NMHS) in the Caribbean; and
- 4. Improving service delivery mechanisms to national, regional and international stakeholders.















# 1.2. Early Warning Information Systems Across Climate Timescales (EWISACTs)

Climate variability and change occur on timescales ranging from sub-seasonal to seasonal to decadal and beyond, making it necessary to develop effective Early Warning Information Systems across Climate Timescales (EWISACTs). An important component of the BRCCC Programme is the establishment of EWISACTs. Early Warning Systems (EWS) are recognized by the *Regional Comprehensive Disaster Management (CDM) Strategy and Programming Framework 2014-2024*<sup>1</sup> and the *Implementation Plan for the 'Regional Framework for Achieving Development Resilient to Climate Change'*<sup>2</sup> as critical to the effective management of climate-related disasters and adaptation to climate variability and change. 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.

#### 2. THE CONSORTIUM OF REGIONAL SECTORAL EWISACTS COORDINATION PARTNERS

A formalized sectoral mechanism in which regional sectoral partners are supported by CIMH to drive the development and implementation of sectoral EWISACTs, not only fosters sectoral ownership of this agenda, but also lays the foundation for the sustainability of sectoral EWISACTs long after the completion of the BRCCC Programme. The Consortium of Regional Sectoral EWISACTs Coordination Partners is therefore conceived to be a key mechanism to champion the design, development and delivery of tailored climate products and services in the agriculture and food security, disaster risk management (DRM)<sup>3</sup>, energy, health, tourism and water sectors<sup>4</sup>. The Consortium of Regional Sectoral EWISACTs Coordination Partners will work together in raising sectoral awareness about EWISACTs and formalizing an approach to the co-development of climate products and services. By providing an opportunity for representing sector issues, positions and recommendations related to weather and climate at the meetings of the Consortium of Regional Sectoral EWISACTs Coordination Partners, the Consortium is intended to facilitate the consultative and participatory processes necessary for successful EWISACTs development and implementation.

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<sup>&</sup>lt;sup>1</sup> Developed by the Caribbean Disaster Emergency Management Agency (CDEMA) in 2014.

<sup>&</sup>lt;sup>2</sup> Developed by the Caribbean Community Climate Change Centre (CCCCC) in 2011.

<sup>&</sup>lt;sup>3</sup> In the Caribbean, the terminology used for this sector is 'Disaster Risk Management' to embody all aspects of the environment. For the Global Framework for Climate Services (GFCS) under which the BRCCC Programme falls, this sector is referred to as 'Disaster Risk Reduction' (DRR).

<sup>&</sup>lt;sup>4</sup> The Global Framework for Climate Services (GFCS) has five initial priority sectors: agriculture and food security, water, health and disaster risk reduction and energy. The tourism sector has been identified as an additional priority sector for the Caribbean region.















#### 2.1. Role

The Consortium of Regional Sectoral EWISACTs Coordination Partners will:

- 1. Provide strategic and technical guidance and support to CIMH on the development and implementation of regional sectoral EWISACTs;
- 2. Advise on the design, development and delivery of tailored climate products and services in six climate-sensitive sectors;
- 3. Provide a forum for initial and periodic review of relevant technical documents related to sectoral climate products and services;
- 4. Identify critical gaps and opportunities for inter-sectoral linkages and synergies at the regional and national levels;
- 5. Facilitate the visibility of sectoral EWISACTs at the regional and national levels; and
- 6. Nurture opportunities to promote technology and knowledge transfer and facilitate the sustainability of sectoral EWISACTs outputs.

# 2.2. Chairmanship

The Consortium will be chaired by the Principal of the CIMH or the Principal's designate. The Chair is responsible for:

- Liaising, where necessary, with members of the Consortium to enhance collaboration and partnership;
- Convening meetings of the Consortium;
- Ensuring that an accurate record of the discussions and decisions of each meeting is prepared and forwarded to Consortium members; and
- Ensuring adequate follow-up on the meeting decisions of the Consortium.

## 2.3. Membership

In addition to the Chair, the members of the Consortium will be representatives from lead regional sectoral institutions with technical expertise in the areas of agriculture and food security, energy, health, disaster risk management, tourism and water:

- 1. Agriculture and food security Caribbean Agricultural Research & Development Institute (CARDI);
- 2. Health Caribbean Public Health Agency (CARPHA);
- Disaster risk management Caribbean Disaster Emergency Management Agency (CDEMA);
- 4. Tourism Caribbean Tourism Organization/Caribbean Hotel & Tourism Association (CTO/CHTA);
- 5. Water Caribbean Water and Wastewater Association (CWWA); and
- 6. Chair and climate services provider Caribbean Institute for Meteorology and Hydrology (CIMH).















Particular consideration will be given to a regional organisation that will support the Energy portfolio of the Consortium.

The Consortium reserves the right to review membership status periodically and make adjustments in this regard.

The specific responsibilities of sectoral partners are detailed in Appendix 1.

#### 2.4. Observer Status

To facilitate broader consensus and buy-in, observer status will be accorded to relevant regional level organisations, namely the CARICOM Secretariat, the Organisation of Eastern Caribbean States (OECS) Commission and the Caribbean Community Climate Change Centre (CCCCC).

The Consortium reserves the right to review observer status periodically and make adjustments in this regard.

# 2.5. Meetings

The Consortium will govern the conduct of its meetings. Meetings will be convened at times convenient to Consortium members. A quorum of four (4) partners will be necessary to convene a meeting.

# 2.6. Frequency of Meetings

The Consortium will meet as frequently as is deemed necessary. However, it is envisioned that Consortium meetings will be convened within every 6 month period.

# 2.7. Venue of Meetings

Meetings of the Consortium generally will be held in Barbados. To the extent where possible, the work of the Consortium will be conducted through virtual meetings and e-mail.















## 2.8. Agenda

The Agenda will be prepared by the Chair, following consultation with the members of the Consortium.

## 2.9. Secretariat

CIMH will provide administrative services to the Consortium.

#### 2.10. Communication

The preparation of the records of all official meetings of the Consortium will be the responsibility of the CIMH and will be forwarded to the Consortium members no later than four (4) weeks after the conclusion of meetings.

### 2.11. Decision-Making

Decisions will be made by consensus. A majority of the representatives (.ie. 4 partners) of the Consortium will constitute a quorum for decision-making. If a quorum cannot be achieved, then documents and key decisions will be circulated to members with a clear deadline date for feedback. If no feedback is received, documents will be deemed approved.

#### 2.12. Duration of the Consortium

The Consortium is formed to provide oversight for the development and implementation of sectoral EWISACTs under the BRCCC Programme and beyond. The BRCCC Programme commenced in January 2014 and is expected to conclude in January 2017. It is expected that the Consortium will continue to work on the sectoral EWISACTs agenda even beyond this time.

## 2.13. Funding of Consortium Activities

CIMH will provide support for the work of the Consortium for the duration of the BRCCC Programme, up to January 2017. Beyond this, CIMH through it's own efforts, and complemented by those of Consortium partners, will investigate avenues for longer term funding support.















# TERMS OF REFERENCE FOR REGIONAL SECTORAL EARLY WARNING INFORMATION SYSTEMS ACROSS CLIMATE TIMESCALES (EWISACTS) PARTNERS

#### 1. INTRODUCTION

Regional coordination of activities under the Sectoral EWISACTs component of the BRCCC Programme will be facilitated through six (6) sectoral partner agencies (see Section 2.3 on Membership above). Appendix 1 of this TOR presents the sector-specific responsibilities for: 1) the Caribbean Agricultural Research & Development Institute (CARDI) as the Agriculture and Food Security EWISACTs regional sectoral partner, 2) the Caribbean Disaster Emergency Management Agency (CDEMA) as the Disaster Risk Management EWISACTs regional sectoral partner, 3) the Caribbean Public Health Agency (CARPHA) as the Health EWISACTs regional sectoral partner, 4) the Caribbean Tourism Organization (CTO) and the Caribbean Hotel & Tourism Association (CHTA) as joint tourism EWISACTs regional sectoral partners, and 5) the Caribbean Water and Wastewater Association (CWWA) as the Water EWISACTs regional sectoral partner for the period October 2015 – December 2016.

The CIMH in its role of Chair of the Consortium and as a regional climate services provider will partner with the above named agencies in their execution of sector-specific responsibilities. These are outlined below.

#### 2. SECTOR-SPECIFIC RESPONSIBILITIES

## The Agriculture and Food Security EWISACTs Partner will:

- 1. Support the co-development and co-implementation of an Agriculture Sector Work Plan for the period January December 2016;
- 2. Facilitate broader dialogue and sustained engagement with regional and national agricultural governance mechanisms, plans and programming (e.g. through the Ministers of Agriculture);
- 3. Provide support to the convening of outreach and training workshops;
- 4. Facilitate the promotion of an agriculture sector EWISACTs through existing and proposed platforms (e.g., meetings, conferences such as the Caribbean Week of Agriculture, website, traditional and social media and the forthcoming Caribbean Society for Agricultural Meteorology (CARISAM);
- 5. Support the principle of data sharing between CIMH and the CARDI membership;
- 6. Facilitate the identification and sharing of textual and georeferenced sectoral datasets for integration into the Caribbean Dewetra platform;
- 7. Facilitate the identification and sharing of historical climate-related impact data to Caribbean agricultural systems for input into the Caribbean Climate Impacts Database;
- 8. Support the conduct of research that examines associations between climatic variables and relevant agricultural productivity outcomes (e.g., crop simulation modelling to assess crop















sensitivity to temperature and rainfall extremes), as well as, research to identify remedial measures;

- 9. Assist in the coordination of the receipt of feedback from CARDI Member Countries on work related to an agriculture EWISACTs (e.g., baseline surveys, the coordination of interviews);
- 10. Provide technical input that contributes to the tailoring and validation of Agroclimatic Bulletins produced by CIMH;
- 11. Promote the dissemination of climate information to the farming community through various platforms (e.g., the CARDI website, social media); and
- 12. Facilitate the embedding of agriculture climate services webpage links hosted on the RCC website with the CARDI Resources webpage.

# The **Disaster Risk Management EWISACTs Partner** will:

- 1. Support the co-development and co-implementation of a Disaster Risk Management Sector Work Plan for the period January December 2016;
- 2. Facilitate broader dialogue and sustained engagement with regional and national DRM governance mechanisms (e.g., the Comprehensive Disaster Management Coordination and Harmonization Council, National Disaster Management Committees, Country Centred Work Programmes, National Disaster Management Plans);
- 3. Provide support to the convening of outreach and training workshops;
- 4. Facilitate the promotion of a DRM sector EWISACTs through existing platforms (e.g., Technical Advisory Council (TAC) meetings, the 9<sup>th</sup> CDM conference, Sector Sub-Committee meetings, the CDEMA website, traditional and social media such as the CDEMA Twitter account);
- 5. Support the principle of data sharing between CIMH and the CDEMA membership;
- 6. Facilitate the identification and sharing of textual and georeferenced sectoral datasets for integration into the Caribbean Dewetra platform;
- 7. Facilitate the identification and sharing of historical climate-related impact data to major socioeconomic sectors for input into the Caribbean Climate Impacts Database;
- 8. Support the conduct of research or a review of research that examines associations between climatic variables and socio-economic outcomes;
- 9. Assist in the coordination of the receipt of feedback from CDEMA Member countries on work related to a DRM EWISACTs (e.g., baseline surveys, the coordination of interviews);
- 10. Provide technical input that contributes to the tailoring and validation of DRM specific climate bulletins produced by CIMH;
- 11. Promote the dissemination of climate information to National Disaster Management Organisations (NDMOs); and
- 12. Facilitate the embedding of DRM specific webpage links hosted on the RCC website with the CDEMA Resources webpage.

## The Health EWISACTs Partner will:















- 1. Support the co-development and co-implementation of a Health Sector Work Plan for the period January December 2016;
- 2. Facilitate broader dialogue and sustained engagement with regional and national health governance mechanisms, plans and programming (e.g., through the annual Chief Medical Officer meeting, the annual Health Minister's meeting);
- 3. Provide support to the convening of outreach and training workshops;
- 4. Facilitate the promotion of a health sector EWISACTs through existing platforms (e.g., the CARPHA Annual Scientific Research Conference, the CARPHA website, traditional and social media);
- 5. Support the principle of data sharing between CIMH and the CARPHA membership;
- 6. Facilitate the identification and sharing of textual and georeferenced sectoral datasets for integration into the Caribbean Dewetra platform;
- 7. Facilitate the identification and sharing of historical climate-related impact data to Caribbean health systems for input into the Caribbean Climate Impacts Database;
- 8. Support the conduct of research or a review of research that examines associations between climatic variables and relevant health outcomes;
- 9. Assist in the coordination of the receipt of feedback from CARPHA Member Countries on work related to a health EWISACTs (e.g., baseline surveys, the coordination of interviews);
- 10. Provide technical input that contributes to the tailoring and validation of health climatic bulletins produced by CIMH;
- 11. Promote the dissemination of climate information to the health provider community through various platforms (e.g., the CARPHA website, social media); and
- 12. Facilitate the embedding of health climate services webpage links hosted on the RCC website with the CARPHA Resources webpage.

# The joint Tourism EWISACTs Partners will:

- 1. Support the co-development and co-implementation of a Tourism Sector Work Plan for the period January December 2016;
- 2. Facilitate broader dialogue and sustained engagement with regional and national tourism governance mechanisms, plans and programming (e.g., the Council of Tourism Ministers and Commissioners, the CTO Board of Directors, the CTO Executive Sub-Committee of the Board of Directors, the CHTA Executive Committee, the CHTA Board of Directors, the CHTA Committees, National Hotel Associations, National Tourism Emergency Management Committees, and strategic partner agencies such as the Association of Caribbean States, the Organization of American States, the United Nations World Tourism Organization and the World Travel and Tourism Council);
- 3. Provide support to the convening of outreach and training workshops;
- 4. Facilitate the promotion of a tourism sector EWISACTs through existing platforms (e.g., meetings and conferences such as the Caribbean Travel Marketplace<sup>5</sup>; the Caribbean Hospitality Industry Education Forum (CHIEF); and the Sustainable Tourism Conference<sup>6</sup>; the CHTA/Caribbean Alliance

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<sup>&</sup>lt;sup>5</sup> Usually convened in January.

<sup>&</sup>lt;sup>6</sup> Usually held in April.















for Sustainable Tourism (CAST) Sustainability Webinar Series; the CHTA and CTO's websites, as well as, traditional and social media such as the CTO Facebook, Twitter, LinkedIn, and Youtube channel and the CHTA website, as well as, the CHTA/CAST webpage);

- 5. Support the principle of data sharing between CIMH and the CTO and CHTA membership;
- 6. Facilitate the identification and sharing of textual and georeferenced sectoral datasets for integration into the Caribbean Dewetra platform;
- 7. Facilitate the identification and sharing of historical climate-related impact data to Caribbean tourism systems for input into the Caribbean Climate Impacts Database;
- 8. Support the conduct of research or a review of research that examines associations between climatic variables and relevant tourism productivity outcomes;
- 9. Assist in the coordination of the receipt of feedback from CTO Member Countries on work related to a tourism EWISACTs (e.g., baseline surveys, the coordination of interviews);
- 10. Provide technical input that contributes to the tailoring and validation of tourism climatic bulletins produced by CIMH;
- 11. Promote the dissemination of climate information to the tourism provider community through various platforms (e.g., the CTO and CHTA websites, social media); and
- 12. Facilitate the embedding of tourism climate services webpage links hosted on the RCC website with the CTO and CHTA Resources webpage.

# The Water EWISACTs Partner will:

- 1. Support the co-development and co-implementation of a Water Sector Work Plan for the period January December 2016;
- 2. Incorporation of aspects of the Water Sector Work Plan 2016-2017 into the CWWA (2015-2017) Strategic Plan;
- 3. Facilitate broader dialogue and sustained engagement with regional and national water resource management governance mechanisms, plans and programming (e.g., annual and national meetings, conferences and other duly convened meetings of the CWWA);
- 4. Provide support to the convening of outreach and training workshops;
- Facilitate the promotion of a water sector EWISACTs through existing platforms (e.g., the CWWA website <a href="http://www.cwwa.net">http://www.cwwa.net</a>, social media and publicity platforms of the Caribbean Water Operators Partnership (CariWOP<sup>7</sup>);
- 6. Support the principle of data sharing between CIMH and the CWWA membership and partners;
- 7. Facilitate the identification and sharing of textual and georeferenced sectoral datasets for integration into the Caribbean Dewetra platform;
- 8. Facilitate the identification and sharing of historical climate-related impact data related to drought and excess precipitation for input into the Caribbean Climate Impacts Database;

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<sup>&</sup>lt;sup>7</sup> CWWA has a formal MoU with the CariWOP.















- 9. Support the conduct of research that examines associations between climatic variables and relevant sector specific outcomes;
- 10. Assist in the coordination of the receipt of feedback from CWWA Member Countries on work related to a water resources management EWISACTs (e.g., baseline surveys, the coordination of interviews);
- 11. Provide technical input that contributes to the tailoring and validation of water resources management climate bulletins produced monthly by CIMH;
- 12. Promote the dissemination of climate information to Water Authorities and water professionals through various platforms (e.g., the CWWA website, social media);
- 13. Facilitate the embedding of water resource management webpage links hosted on the RCC website with the CWWA Resources webpage; and
- 14. Facilitate (through cost sharing) the meeting of the Consortium within CWWA regional workshops/conferences, where possible beyond the BRCCC Programme.















### About the Caribbean Institute for Meteorology and Hydrology (CIMH)

The CIMH is an Institution of the Caribbean Community (CARICOM) and the technical Organ of the Caribbean Meteorological Organization (CMO). The mandate of the CIMH is to assist in improving and developing the National Meteorological and Hydrological Services (NMHSs), as well as, providing the awareness of the benefits of Meteorology and Hydrology for the economic well-being of the CIMH Member States. This is achieved through training, research, investigations, and the provision of related specialized services and advice. The specific functions of CIMH include:

- 1. World Meteorological Organization (WMO) Regional Training Centre (RTC): CIMH trains professionals in operational meteorology and hydrology and the climate sciences. CIMH is also responsible for the delivery of courses for the completion of the BSc Degree in Meteorology at the University of the West Indies.
- Centre for research in Meteorology, Hydrology, Climatology and Associated Sciences: The Institute is the leading
  institution in the English-speaking Caribbean engaged in focused and inter-disciplinary research in tropical meteorology,
  tropical climatology, hydrology and water resources management. This often necessitates collaboration with other
  relevant regional national and international organisations.
- 3. Regional Climate and Hydrological Data Centre: Since its inception, the Institute has been used by Member States of the CMO as a location for the region's climate data archive. As part of this responsibility, the Institute is responsible for collecting the region's climate data, quality assuring the data, archiving the data and disseminating the data to regional and international stakeholders.
- 4. **Regional Instrument Centre (RIC)**: In its capacity as the RIC for Member States of the CMO, the Institute supports instrument calibration, instrument maintenance and repair, identification of appropriate instruments for the region and instrument procurement and installation. In addition, the Institute conducts training programmes in instrument maintenance and calibration for persons from and outside of the region. The Institute is also active in research and development leading to the development of new instruments and better instrument maintenance programmes.
- 5. **Regional Centre of Excellence for Training in Satellite Meteorology:** CIMH is one of the network of thirteen training Centres of Excellence worldwide established by WMO that actively participating in the Virtual Laboratory for Training and Education in Satellite Meteorology (VLab) programme. These Centres are working together to improve the utilization of data and products from meteorological and environmental satellites.
- 6. **Regional Climate Centre:** CIMH has already established itself as the primary provider of climate services and products to the several socio-economic sectors in the Caribbean. Seeking to establish itself as a WMO Regional Climate Centre for the Caribbean, CIMH launched the Demonstration Phase in April 2013, as it builds toward full designation.
- 7. Caribbean Centre for Climate and Environmental Simulations (CCCES): The CCCES was established in 2014 at the CIMH through support from the USAID BRCCC Programme. The CCCES is part of the region's strategy to build and sustain regional resilience to the risk posed by climate change, increasing climate variability, extreme weather and increasing environmental degradation and change. The CCCES addresses resilience in these areas by providing CARICOM scientists, engineers and researchers with state-of-the-art computations resources to conduct complex simulations and analyses within and across disciplines on a range of scenarios (cover varying spatial and temporal scales) to adequately identify, bound and mitigate the drivers of risk to the social and economic development of the Caribbean.















#### About the Caribbean Agricultural Research & Development Institute (CARDI)

The Caribbean Agricultural Research & Development Institute (CARDI) was established in 1975 by the Heads of Governments of the Caribbean Community (CARICOM) to serve the agricultural research and development needs of the member states of CARICOM.

CARDI is positioned to "increase agricultural and food production and productivity through the use of science, technology, innovation, information resources and sustainable natural resources management, thereby increasing the competitiveness of the agri-food sector and enhancing food and nutrition security" and thus improving the quality of rural life.

The vision of the Institute is to be the Centre of Excellence in the Caribbean for the provision and application of research for development in agriculture that contributes to the creation of wealth and the competitiveness of the sector in the Region.

Its Mission is to contribute to the sustainable development of Caribbean people by the generation, transfer and application of appropriate technologies through agricultural research for development.

CARDI has as part of its Medium Term Plan (MTP) committed to the strengthening of collaboration and partnerships with national, regional and international organisations. The MTP also articulates a programme in climate change which is aimed at the implementation of the Region's agricultural research and development initiative to adapting to and mitigating global climate change. A part of these two important components is collaboration with agencies and programmed which provide climate services to the agriculture sector.

In this regard, CARDI has had a proud record of collaboration with the Caribbean Institute for Meteorology and Hydrology (CIMH) viz:

- CARDI has attended every session of Caribbean Climate Outlook Forum (CariCOF) since its re-introduction into the Region in 2010;
- CARDI in collaboration with the CIMH, the World Meteorological Organization (WMO) and National Meteorological and Hydrological Services (NMHSs) of ten Caribbean member States also executed the programme entitled Caribbean Agro-Meteorological Initiative (CAMI) which was funded by the Organisation of African Caribbean and Pacific States (ACP) Science and Technology (S&T) Fund to provide training and information to agricultural stakeholders in the region over the period 2010 -2013;
- CARDI has taken a very serious interest in all matters pertaining to the provision of climate services to the agricultural community including participation in the Global Framework for Climate Services (GFCS) Meeting (Trinidad, May 2013); and
- CARDI is a member of the Building Regional Climate Capacity in the Caribbean (BRCCC) Programme Steering Committee.















### About the Caribbean Disaster Emergency Management Agency (CDEMA)

The Caribbean Disaster Emergency Management Agency (CDEMA) was established in 2001 as the Caribbean Disaster Emergency Response Agency (CDERA) by the Heads of Government of the Caribbean Community (CARICOM) as the lead regional Agency to provide guidance and oversight of disaster management in the Caribbean. In this regard, the Agency must make an immediate and coordinated response to any disastrous event affecting any Participating State, once the State requests such assistance. The Agency transitioned in 2009 to CDEMA, having recognized the need to officially expand its mandate to include a focus on the promotion of disaster loss reduction and mitigation in the Participating States.

CDEMA's objectives as articulated in the Agreement Establishing CDEMA are as follows:

- a) Mobilising and coordinating disaster relief;
- b) Mitigating or eliminating, as far as practicable, the immediate consequences of disasters in Participating States;
- c) Providing immediate and coordinated response by means of emergency disaster relief to any affected Participating State;
- d) Securing, coordinating and providing to interested inter-governmental and nongovernmental organisations reliable and comprehensive information on disasters affecting any Participating State;
- e) Encouraging i) The adoption of disaster loss reduction and mitigation policies and practices at the national and regional level; ii) Cooperative arrangements and mechanisms to facilitate the development of a culture of disaster loss reduction; and
- f) Coordinating the establishment, enhancement and maintenance of adequate emergency disaster response capabilities among the Participating States.

CDERA, now CDEMA, spearheaded the adoption of a strategic CDM framework in 2001 in collaboration with stakeholders. The strategic objective of CDM is the integration of disaster management considerations into the development planning and decision-making processes of Participating States (PSs). The CDM Strategy is now in its third iteration for the period 2014-2024 which was informed by findings from a review of the progress made on the Strategy 2007-2012 through extensive broadbased stakeholder consultations, which lasted over one year. The goal of the CDM Strategy 2014-2024 is to realise "Safer, more resilient and sustainable CDEMA Participating States through Comprehensive Disaster Management." This goal is supported by four (4) global high level priority outcomes and sixteen (16) specific final outcomes.















## About the Caribbean Public Health Agency (CARPHA)

The Caribbean Public Health Agency (CARPHA) combines the functions of five former Caribbean Regional Health Institutions (RHIs) into one single agency. These include The Caribbean Environmental Health Institute (CEHI), The Caribbean Epidemiology Centre (CAREC), The Caribbean Food and Nutrition Institute (CFNI), The Caribbean Health Research Council (CHRC) and The Caribbean Regional Drug Testing Laboratory (CRDTL). These institutions had, and continue through CARPHA, to possess a long history of technical cooperation with its Member States and partners, to provide expertise in health systems and support for country-level implementation. Given the disparity in size and resources across the region the principles of solidarity in health have been practiced for several decades, and within this collective system CARPHA has several comparative advantages. This includes: mechanisms to work with states and territories in the Caribbean; convening role; development and implementation of health policies, strategies, standards and guidelines; the ability to connect the Region to global experts and technical resources through its various networks and partners.

CARPHA provides strong regional leadership, technical cooperation and promotes evidence-based decision making to its Member States as they pursue the goals of the current (third) iteration of the Caribbean Cooperation for Health (CCH III). As the public health agency for CARICOM, CARPHA is mandated to lead strategic collaborative efforts among Member States and other partners to promote equity in health, to combat disease, and to improve the quality of the lives of the peoples of the Caribbean. CARPHA aims to be the major regional catalyst for ensuring that all peoples of the Caribbean enjoy optimal health, and that we contribute to the well-being of their families and communities. In this regard, CARPHA is well-positioned to be the mechanism through which the objectives of this project can be achieved.

This project is fully consistent with CARPHA's current activities in the area of environmental health as well as public health. CARPHA Member States include a number of vulnerable Small Island Developing States (SIDS) and low-lying coastal states. These SIDS face significant challenges to their sustainable development as a result of climate change, natural and environmental disasters and other global threats. Our Environmental Health and Sustainable Development Department (EHS) is based in St. Lucia. This department supports the Caribbean's sustainable development agenda by playing a lead role in key areas related to environmental management for optimal public health.

CARPHA also has an excellent track record in the implementation and execution of projects, and as a regional centre works with Member States, and other key partners, to protect and promote the health of people in the Caribbean. Since its formal operationalisation in 2013, CARPHA has been awarded multi-million dollar project funding from development partners to respond to the priorities and needs of CARPHA Member States.

CARPHA will provide the technical leadership for the health components in the execution of the project. CARPHA is headquartered in Port of Spain, Trinidad and Tobago. It is responsible for regional initiatives and providing the necessary technical cooperation to CARICOM to advance the regional health agenda. Our Environmental Health and Sustainable Development Department will spearhead this project.















# **About the Caribbean Tourism Organization (CTO)**

The Caribbean Tourism Organization (CTO), with headquarters in Barbados and offices in New York and London, is the Caribbean's tourism development agency comprising membership of over 25 countries and territories including Dutch, English, French and Spanish, as well as a myriad of private sector allied members.

## **Vision and Purpose**

The CTO's vision is to position the Caribbean as the most desirable, year round, warm weather destination by 2017 and our purpose is Leading Sustainable Tourism – One Sea, One Voice, One Caribbean.

#### **Objectives**

The primary objective of the Caribbean Tourism Organization is to provide to and through its members the services and information necessary for the development of sustainable tourism for the economic and social benefit of the Caribbean people by:

- providing an instrument for close collaboration in tourism among the various territories, countries and other interests concerned;
- developing and promoting regional travel and tourism programs to and within the Caribbean;
- providing members with opportunities to market their products more effectively to both the Caribbean and the international tourism marketplaces;
- assisting member countries, particularly the smaller member countries with minimal promotional budgets, to maximize their marketing impact through the collective CTO forum;
- carrying out advertising, promotions, publicity and information services calculated to focus the attention of the public upon the Caribbean as one of the world's outstanding tourist destinations;
- providing a liaison for tourism matters between member countries;
- providing a sound body of knowledge on tourism through data collection, collation and research;
- creating processes and systems for disseminating and sharing tourism information;
- providing advice, technical assistance and consultancy services with respect to tourism
- providing training and education for Caribbean nationals and for international travel agents;
- seeking to maximize the contribution of tourism to the economic development of member countries and the Caribbean through programs likely to increase foreign exchange earnings, increase employment, strengthen linkages between tourism and other economic sector like manufacturing and agriculture, and to reduce leakages from Caribbean economies;
- encouraging coordination with respect to research and planning and the efficient allocation of local, regional and international resources at both government and non-governmental levels in tourism development;
- researching and identifying the ecological effects of tourism with a view to recommending and /or initiating action aimed at minimizing the negative and enhancing the positive effects;
- promoting the consciousness of the need to preserve both the natural and man-made beauty of the Caribbean environment and demonstrating its direct relationship to the development of an attractive tourism product;
- developing a tourism product which is essentially Caribbean and which, through maximizing economic benefits, has minimal adverse social and psychological effects on the integrity of Caribbean peoples.















## About the Caribbean Hotel & Tourism Association (CHTA)

#### **CHTA's Mission Statement**

To facilitate the full potential of the Caribbean hotel & tourism industry by serving member needs and building partnerships in a socially responsible and sustainable manner.

The Caribbean Hotel & Tourism Association is a Federation of Associations, encompassing 32 national hotel associations from around the region. The diversity that characterizes the federation of CHTA throughout the Caribbean offers its members the opportunity to benefit from the strengths of its colleagues from other countries and other national hotel associations.

CHTA is headquartered in Miami, Florida, Finance Office in San Juan, Puerto Rico and a project office in Barbados. The Association is governed by a board of directors elected by the member national hotel associations, according to their size. Two directors are elected to represent airlines, five to represent other allied members, one to represent chain hotels, and one each to represent the Caribbean Society of Association Executives (CSHAE), the Caribbean Association of Industry and Commerce (CAIC), the Caribbean Council (CC), and the Caribbean-Central American Action (C-CAA). The Caribbean Tourism Organization (CTO) appoints three representatives to the CHTA board.

#### **About CAST**

CAST serves as an initiative of CHTA to provide tourism enterprises with sustainability resources, best practices and work alongside CHTA committees to provide support for the advocacy of sustainability within the region.

### **Strategic Focus & Services**

- Information & Resources: providing detailed studies of sustainability examples, lessons learned and resources to make the case for sustainability throughout tourism enterprises. To work in partnership with aligned groups and organizations throughout the region.
- Advocacy: promoting responsible environmental and social issues within the Caribbean tourism sector and representing the interests and successes of the sector at key regional and international forums; reporting on meeting outcomes to the sector. Contribution to influence governance and decision making regarding sustainability within the sector.
- Sustainability Training & Special Projects: through the use of toolkits, special publications & projects (Resource Guides), training programs and modules.

#### **Objectives**

- To serve as a first step resource to tourism enterprises in the area of information and education for sustainable tourism implementation.
- To provide tangible results to tourism enterprises through sustainability training and education. Assist with certification guidance, vendor and products information.
- Develop synergies and strategic partnerships with sustainable tourism efforts to ensure a cohesive solution to sustainability within the region.















#### About the Caribbean Water and Wastewater Association (CWWA)

The CWWA was established by an Act of Parliament of Trinidad and Tobago in 1991. It is located in Trinidad and housed at the Headquarters of the Water and Sewerage Authority of Trinidad and Tobago (WASA). It is the only regional, professional body representing the water and waste management sectors in the Caribbean. Its membership comprises water and waste professionals/experts, companies in the private sector, other professional water and waste management associations within the hemisphere, students and regional organisations.

The CWWA is governed by an Executive Board drawn from its Membership and the day to day operations are managed by the Secretariat headed by an Executive Director. The Association has embarked on the implementation of a 3 year Strategic Plan spanning 2015 to 2018 and some elements of the plan include the further enhancement of 1. programme development through technical cooperation with donor and development agencies; 2. expansion of its training portfolio; 3. expansion of its membership base and development of national sections; 4. resource mobilisation and 5. building of partnerships.

The CWWA has a strong network of partners who have supported it and or with whom it has collaborated. These include the Pan American Health Organisation (PAHO), the Inter-American Development Bank (IDB), UN Habitat, United Nations Environment Programme (UNEP), the Asociación Interamericana de Ingeniería Sanitaria y Ambiental (AIDIS) (Spanish: Inter-American Association of Sanitary and Environmental Engineering, the Global Water Operator's Partnership (GWOPA); the Caribbean Water and Sewerage Association (CAWASA), the Caribbean Development Bank (CDB) and the Pacific Waterworks Association (PWA). It is also recognised by the CARICOM Secretariat as well as the OECS Commission as a voice for water for the region and sits on relevant organs of CARICOM and the OECS Commission.

Since 2004, the CWWA has organised the High Level Forum (formerly High Level Session) of Caribbean Ministers Responsible for Water (HLF) at which discussions of policy and political issues regarding the water sector are addressed by Government officials, technical agencies and development partners. In recent years, these have included the issues of climate and its impact on the water sector, waste water, investment and financing, to name a few. The Annual Conference and Exhibition of the CWWA is held on a rotating basis in member countries and is usually supported by the national water utility and waste management company. This is its flagship event, attracting close to 300 persons in the sector, sponsors and exhibitors. The Conference is the largest such gathering of water and waste management professionals in regionally and internationally.

The work of the CWWA has focused on training of its membership and capacity building. It has a signed a Memorandum of Understanding (MOU) with CAWASA for the joint Secretariat of the CariWOP or Caribbean Water Operators Partnership which is a platform for twinning of Utility Companies with a view to exchanging expertise, joint training, information sharing and generally supporting each other in their development. The CWWA also sits on technical committees of regional projects such as the Caribbean Regional Fund for Wastewater Management (CreW) and the Integrated Water and Ecosystems Project (IWECO), both of which are funded by the Global Environment Facility (GEF), Executed by UNEP and other partners.

The CWWA recognises the significance of Climate to the sector and has committed to working with relevant agencies to have the impacts addressed by the sector.