Connections

April 2017

A bi-monthly electronic bulletin about interdisciplinary research, teaching and outreach at the Centre for Resource Management and Environmental Studies (CERMES)
Editors: Maria Pena and Dr. Patrick McConney

CERMES and 2017 Marine Climate Change Report Cards

By Hazel Oxenford and Adrian Cashman

The Caribbean Marine Climate Change Report Card 2017 was recently launched at the 15th Meeting of the Caribbean Fisheries Forum in Jamaica. Representing a regional evaluation of climate change impacts on Caribbean Small Island Developing States (SIDS) living marine resources, coastal communities, and the fisheries and tourism sectors, this important document provides a summary of what has already happened, what is likely to happen and what needs to be done to improve future resilience. The Report Card was produced by the Commonwealth Marine Economies (CME) Programme which aims to support the sustainable growth of Commonwealth SIDS within the Caribbean, Pacific and Indian Ocean regions. The programme is supported through the UK Foreign and Commonwealth Office, UK Hydrographic Office, and Centre for Environment, Fisheries and Aquaculture Science (Cefas). The Report Card was developed from 12 commissioned Scientific Reviews, five of which were authored by academics from the University of the West Indies, including three produced by CERMES. These substantive reviews covered the impacts of climate change on (1) Fisheries, (2) Fish and Shellfish, (both by Prof. Hazel Oxenford and Dr. Iris Monnereau) and (3) Settlements and Infrastructure (by Dr. Adrian Cashman and Mr. Mohammed Nagdee) in coastal and marine areas of Caribbean SIDS.

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Celebrating World Water Day

By Crystal Drakes

This year CERMES collaborated with the Department of Economics to put on a debate entitled, “The Future of Water in Barbados - Addressing a Key Development Challenge.” Currently Barbados is at a major crossroad on how it will deal with the issues surrounding the provision of water around the island. Both departments believed that diverse solutions should be discussed in a captivating way in order for a wide spectrum of solutions to be heard by society.

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Some of the main issues are: Barbados is the most water scarce country in the Caribbean; there is a high rate of leakage within the distribution system; almost 80% of water comes from groundwater sources making the island highly reliant on rainfall for freshwater therefore the recent droughts have placed a strain on the supply of water; climate projections indicating there will be less rainfall in the coming decades and the threat of sea level rise will have an impact on the supply of water on the island.

Many solutions were discussed on how to address the current and future challenges these included; the multi-purpose reservoir facilities, reduction of the leakage rate from 40% to around 20%-25%, greater emphasis on water conservation, increasing the price of water while protecting the vulnerable groups in society, the introduction of new agricultural practices and the integrated use of wastewater in society. Over 100 persons attended the debate. The attendees were from various walks of life, students, business owners, engineers, activists, public sector workers, and private citizens among others.

CBD Sustainable Ocean Initiative

By Patrick McConney

CERMES provided the Convention on Biological Diversity (CBD) Secretariat with a resource person for the CBD Sustainable Ocean Initiative Regional Capacity Building Workshop for the Wider Caribbean and Central America held from 18-25 February 2017 in Costa Rica. Marine spatial planning (MSP) was the focus of the training. There was a sizable contingent from CARICOM countries. The photo shows the eastern Caribbean group hard at work. MSP remains a critical area of attention throughout the region in several projects and programs. CERMES continues to build capacity in MSP through its MSc course and specialised training events.

Caribbean Fisheries Forum

By Patrick McConney

The UWI was well represented at the 15th Caribbean Fisheries Forum held in Jamaica from 30–31 March 2017. Participants from Mona and Cave Hill campuses presented reports on projects and publications as invited observers to the Forum. CERMES organised a pre-Forum workshop on 29 March 2017 to assist the executive of the Caribbean Network of Fisherfolk Organisations (CNFO) in building its organisational capacity. An important achievement for CERMES and project partners was the Forum's endorsement of a participatory process for formulating a protocol to incorporate the Small-Scale Fisheries Guidelines into the Caribbean Community Common Fisheries Policy.

Sustainable Fisheries Interim Coordination Mechanism

By Patrick McConney

CERMES was an observer at the Sustainable Fisheries Interim Coordination Mechanism Meeting held on 28 February 2017 in Barbados. This initiative is convened

under the CLME+ Project and brings together the three regional fisheries bodies in the Wider Caribbean Region. The institutional arrangements for the mechanism are of particular interest to CERMES in its continued applied research on marine resource governance.

Global SocMon grant funding

By Maria Pena

CERMES has been successfully awarded a USD 40,500 grant from the National Fish and Wildlife Foundation (NFWF) to facilitate the coordination and enhancement of the seven regional Socio-economic Monitoring for Coastal Management (SocMon) programs around the world. The project will build on previous NFWF-funded work (Phase I). In Phase II, CERMES will provide support for developing a centralised open access global SocMon database; identifying complementary tools for method enhancement; developing promotional products; and coordinator travel. The project will be managed by Maria Pena and Patrick McConney.

MAGIC workshops

By Lisa-Ann Rollins

CERMES partnered with a global project, Middleware for collaborative Applications and Global Virtual Communities (MAGIC) to host a two-day technical training workshop on Eduroam and its application to the Caribbean region from 10-11 April, 2017. The workshop was facilitated by Mr. Brook Schofield of GÉANT - Europe's leading collaboration on e-infrastructure and services for research and education. It targeted technical and IT representatives from various universities and colleges in Barbados and the Eastern Caribbean. Dale Benskin, CERMES IT, participated in the workshop.

Then again on 12 April CERMES collaborated with the Global Science Communities of the MAGIC Project to host a one-day Enviro-Health seminar. This seminar enabled the sharing of recent research and initiatives of researchers, academics and practitioners in the respective sciences relating to the environment and health (see following article). Dr. Janice Cumberbatch, CERMES Lecturer, gave one of the opening presentations on behalf of CERMES. Ms. Lisa-Ann Rollins, CERMES Secretary, organized both workshops.

More on MAGIC

By Colleen Wint-Bond

CERMES collaborated with a global project called MAGIC on an event focusing on the link between climate change, water and health. According to CERMES Director, Dr. Adrian Cashman, these are all areas that CERMES has a keen and on-going interest in.

The MAGIC project (http://magic-project.eu/) has been a solution to the challenges sometimes faced by students, academics and researchers in finding others to collaborate on projects in their field of study, either within their department, the region or internationally. The event, hosted by the EU-funded MAGIC Project in partnership with CERMES and themed 'Caribbean MAGIC: Enhancing Collaboration in Research and Education' aimed to stimulate and strengthen technical and science practitioners with regards to the collaboration of communities of interest and practice in the Caribbean and to consider possible joint project(s) or research ideas, based on concerns or gaps, and tailored to potential funding.

CERMES was proud to share their track record, not only in promoting an integrative water research agenda for the Caribbean, but especially in seeking to bring together different disciplines, and colleagues, each with their unique contribution, while at the same time

providing opportunities for young Caribbean researchers.

MAGIC is implemented by a global consortium of national and regional education and research networks (NRENs and RENs), including the Caribbean. It enables some of the advanced technology and software already established by the more developed countries to be made available and shared with research, education and other knowledge-sharing resources in less developed countries and regions, such as Africa, the Caribbean, Central and South America. The MAGIC team introduced the project, and highlighted "Colaboratorio", a product which enables scientific and academic cooperation.

The first two days were spent with the "techies", ensuring that IT representatives were able to support the needs of their research and academic staff. On day 3, MAGIC's "Global Science Communities" (GSC), combined two of their four thematic areas – the environment and health. The presenters were Dr. David Smith, from the Institute for Sustainable Development, UWI, Mona; Ms. Crystal Drakes, Research Associate, CERMES; Dr. John Charley, Coordinator of Computer Science, Department of Computer Science, Mathematics and Physics, UWI and Climate Studies Group; and Dr. Heather Harewood, Clinical Public Health Specialist, Faculty of Medical Science, UWI, Cave Hill. Presentations with their recommendations can be found at:
https://eventos.redclara.net/indico/event/794/material/slides/

Mr. Marc Thill, Head of Cooperation at the European Union in Barbados brought greetings, and highlighted the Horizon 2020 initiative, a collaborative funding opportunity that is open to participation from across the world.
http://ec.europa.eu/research/iscp/index.cfm?pg=participate

CERMES was happy to see the synchronicity with MAGIC in promoting and supporting the collaboration of communities of interest and practices, but was grateful to their providing the important to facilitate research and data collaboration, and shrink the physical space that tends to separate practitioners and researchers.

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Research drone project

By Kimberly Baldwin

Aerial data collection and the production of basemaps are fundamental for surveying, monitoring, managing and ultimately the conservation of natural resources. Over the last decade, advances in remote sensing technologies have seen the development and application of small Unmanned Aircraft Systems (UAS), or 'drones', emerge as a valuable tool for environmental management. Drones are now being used as a research tool by scientists to collect highly accurate data for a wide variety of applications such as habitat and resource base mapping; animal enumeration and changes in abundance; quantifying the effects of climate change by measuring atmospheric variations such as temperature and reflectance; calculating canopy cover and conducting vegetative health analyses; modelling elevation and flooding; as well as monitoring and surveillance activities, search and rescue, disaster management and the assessment of impacts.

Through the procurement of drones by CERMES, The UWI is setting a new standard for environmental research and conservation both nationally and regionally. The on-going Research Drones Project seeks to demonstrate UAS best practices and enhance the safe and efficient collection and management of spatial data. The Research Drones Project will highlight UAS environmental applications as well as demonstrate best practices to enhance the safe operation of drones and efficient collection and management of UAS spatial data. Lead by Dr. Kimberly Baldwin, CERMES Post-doc Research Associate and GIS Lecturer, our MSc students recently participated in a drone mapping exercise of Sandy Beach and St. Lawrence lagoon ecosystem. Students were shown how to use flight planning software to acquire and post-process high resolution aerial images to create an orthomosaic image, digital elevation model and GIS data for the study area.