



*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*

22nd Annual CWWA Conference and Exhibition

By Jenna Blackwood

CERMES PhD Candidate Jenna Blackwood attended the 22nd Annual Caribbean Water and Wastewater Association (CWWA) Conference and Exhibition held at the Hilton Barbados Resort from 6-11 October 2013. The CWWA is the premier event for water, wastewater and solid waste professionals and suppliers in the region. The purpose of the event is for delegates to share information and network with key persons and organizations, as well as to become aware of current trends, issues and solutions in the industry. Delegates attended from many Caribbean islands as well as North America, Central and South America and as far as Israel.



Conference attendees at the opening ceremony
Source: whatsupcaribbean.com

The theme of the event was "Water and Waste Management in the Caribbean: Cooperation for Action" and comprised paper presentations and high level meetings for Ministers of Water and senior management of water providers in the member countries. There was also an

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exhibition showcasing a variety of water and wastewater related products and services.

Jenna presented a paper titled, 'Preliminary results of interviews on stormwater governance and household surveys on stormwater management practices in Castries, St. Lucia' under the theme Water Resource Management. Former CERMES Water Resource Management student Kelly-Ann Knight was also in attendance as a customer service representative for the global urban water efficiency solution provider, Miya.

CERMES at Biennial International Waters Conference

By David Gill

The 7th Global Environment Facility (GEF) Biennial International Waters Conference (IWC-7) was held in Barbados from 26-31 October. Attended by over 250 participants globally, the theme of the conference was "Economic Valuation as a Tool to Bridge the

Science policy Gap". The chosen theme arose out of the 2012 International Waters Science Conference when it was recognised that one way of bridging the science-policy gap was the greater use and appreciation of economic valuation as a communication tool to convey the importance of ecosystems in terms of their economic worth. Recognising that for many GEF project managers and staff, the topic of ecosystem services and economic valuation were new concepts, a two-day pre-conference workshop was held on these topics. The workshop examined the basic approaches to economic valuation and how the methodologies could be applied in a variety of real-life situations, drawing on examples of best practice.

Although the workshop was run and facilitated by international experts from organisations such as the International Union for the Conservation of Nature, UNEP GRD Arendal, NOAA and UNIDO, CERMES was invited to assist with the facilitation.

Adrian Cashman and David Gill (PhD candidate) facilitated sessions on: Identification and reconciling multiple uses of ecosystem services using an ecosystems based approach; Using valuations to influence decision-making and; during the main conference facilitating interactive discussions on the challenges and opportunities for using economic valuation to inform the GEF Transboundary Diagnostic Assessment – Strategic Action Plan (TDA-SAP) process.



Adrian Cashman facilitating a small group session

International Cooperation Agreement with UFPR, Brazil

By Patrick McConney

CERMES was instrumental in the recent signing of an International Cooperation Agreement between the Federal University of Paraná (Universidade Federal do Paraná (UFPR)) and The University of the West Indies. UFPR is located primarily in the city of Curitiba, in Paraná state, Brazil. The UFPR Centre for Marine Studies (CEM) in the nearby coastal town of Pontal do Paraná was the site of the graduate course and workshop on socio-economic monitoring jointly offered by CERMES and CEM in August 2013. Several other types of collaboration between the universities have been reported in *CERMES Connections* and the list is expected to grow longer and stronger with the new Agreement. The five-year agreement provides a framework for faculty and student exchanges, joint research and teaching, publications, and much more. Patrick McConney will operationally manage the agreement on behalf of UWI and Rodrigo Medeiros on behalf of UFPR.

Large CERMES showing at 66th GCFI

By Maria Pena

The 66th Annual Gulf and Caribbean Fisheries Institute (GCFI), held in Corpus Christi, Texas, 4-8 November 2013 was attended and subscribed by one of the largest groups of CERMES staff and students in recent years. Seven oral and three poster presentations were made by staff, MSc, and PhD students and one Post Doctoral Fellow.

TBTI helped to sponsor the GCFI Fishers Forum

By Patrick McConney

Too Big To Ignore (TBTI) played a major role in the Fishers Forum of the 66th Annual Meeting of the Gulf and Caribbean Fisheries Institute

(GCFI). The theme of the 2013 Fishers Forum was “Collaborative science towards sustainable fisheries” which fit well with Working Group 4 (WG4) on “Enhancing the stewardship”. Arranged by WG4 leader Patrick McConney of CERMES, TBTI fully sponsored the participation of two Gladding Memorial Award (GMA) winners, fishers Andres Maldonado from Puerto Rico and Angelica Mendez from Guatemala, who made presentations in the conference. They assisted WG4 leader Patrick McConney and other GCFI organisers with the fishers’ field trip to nearby Gulf ports and with the fishers’ action planning session to organise new activities.



Andres and Angelica (right) are shown with previous GMA winner Don DeMaria and commercial fisher Eddie Toomer (left) from Florida who was awarded the GMA this year. The award was in recognition of Eddie’s lifetime commitment to sustainable fisheries including the development of the Turtle Excluder Device (TED) to reduce shrimp trawl by-catch. Eddie, Don, Andres and Angelica are excellent examples of fishers who are enhancing fisheries stewardship in tangible ways. Close collaboration between GCFI and TBTI should continue in the development of the GCFI fishers ambassadors initiative.

CERMES to assist in mentoring fisherfolk

By Patrick McConney

The Caribbean Natural Resources Institute (CANARI) is implementing a project on “Enhancing food security from the fisheries

sector in the Caribbean: Building the capacity of regional and national fisherfolk organisation networks to participate in fisheries governance and management”. The project partnership includes CERMES, the Caribbean Network of Fisherfolk Organisations (CNFO), Panos Caribbean and the Caribbean Regional Fisheries Mechanism (CFRM).



Katherine Blackman and Neetha Selliah of CERMES (seen above), along with Patrick McConney as a resource person, attended the project’s Regional Training of Trainers Workshop for Mentors held from 19 – 22 November in Saint Lucia. There were about 20 mentors and resource persons from 17 Caribbean countries. Joined by PhD candidate Shelly-Ann Cox, Katherine and Neetha will serve as mentors to fisherfolk organisations in Barbados to help strengthen their capacities to become better engaged in fisheries policy decision-making at the national and regional levels over the next few years.

Climate-smart facility opened in St. Lucia

Extract from <http://caribbeanclimateblog.com>

In early December, the Marchand Community Centre, a climate-smart facility near Castries, Saint Lucia was officially opened. “The Community Centre was renovated and retrofitted as a pilot adaptation project under the Special Programme on Adaptation to Climate Change (SPACC): Implementation of Adaptation Measures in Coastal Zones Project - a multi-component initiative executed by the Centre with co-financing from the Global

Environment Fund (GEF) through the World Bank and the Government of Saint Lucia.”

“The community centre was renovated and retrofitted to demonstrate the design and implementation of appropriate interventions to reinforce critical infrastructure that can withstand the effects of intensified wind speeds from category three and above hurricanes. Dr Kenrick Leslie, Executive Director of the Caribbean Community Climate Change Centre(5Cs) told the gathering of community members, government officials and media that the USD 300,000 facility, 60% of which was financed through the 5Cs, incorporates new wind speed engineering design and is an energy efficiency success story.”

“Reinforced critical infrastructure such as the Marchand Community Centre, a multipurpose facility slated to also function as a hurricane shelter, is a key part of efforts to make the Caribbean more climate resilient, especially as scientists predict an average of three to four Category 4 and 5 hurricanes per year by 2025 in the Atlantic Basin.”

Calculating Carriacou's WPI

Candi Hosein one of our MSc students recently undertook research using the Water Poverty Index (WPI) to explore water availability and security on Carriacou, the largest island of the Grenada Grenadines. Below is a summary of an article she submitted about her research for the *Connections*.

“...At present communities on Carriacou depend heavily on rainfall and rainwater harvesting as their major source of water for both agricultural and domestic purposes. The three communities selected for this project were Hillsborough, Windward and Bogles all of which fell into the Limlair-Dover and Craigstone catchments located in the northern part of the island.”

Household surveys of these communities as well as statistical and climatic secondary data “revealed that residents of the island engage in rainwater harvesting as their main source of water and primarily use cisterns, tanks and

drums for storing water at their homes. ..This stored water is usually treated using: schools of small fish locally referred to as ‘millions’ which consume any algal build up within the cistern; bleach; boiling; and chlorine tablets. ...”this method of collecting and treating water is also used by businesses and schools.”

“...many people continue to rely on rainfall and rainwater harvesting as their main source of water for domestic use...community sharing forms an integral feature of water management on the island. During periods of low rainfall and drought residents, churches, schools and other establishments generally share their water supply. Notably, homeowners who only periodically reside on Carriacou allow permanent residents to access their cisterns during their absence.”



Above ground cistern with guttering system

“Apart from rainfall, only residents of Hillsborough have access to borehole water through stand-pipes and at present there are just five stand-pipes in this community...residents revealed...that they very rarely use this source of water due to its limited treatment.”

Candi notes that “in the past attempts were made to introduce other modes of accessing water in Carriacou” such as the establishment of a desalination plant by the National Water and Sewage Authority (NAWASA) in 2000 but due to various issues the plant was closed in 2006.

“The communities interviewed were a tight knit group that recognised the importance

of water to themselves and to the environment. Active water conservation measures are also being implemented such as low flush toilets and buckets of water for bathing. While some hotels use timed faucets. Candi states, "this clearly illustrates an acute awareness of the difficulties involved in acquiring, storing and treating clean and safe water for human use."

"As a young scientific researcher this experience has allowed me to see first-hand some of the issues being experienced at the community level from real individuals. At the end of my baseline study it is quite evident that more research into the water situation in Carriacou is necessary. Accordingly, through more detailed research, attempts can be made to ameliorate the water situation here especially in the face of climate change."

CERMES hosts BIOPAMA PA Officer

By Hyacinth Armstrong-Vaughn

Hyacinth Armstrong-Vaughn recently joined the IUCN Mesoamerican and Caribbean Initiative team as the Protected Areas Officer for the Biodiversity and Protected Area Management (BIOPAMA) project (www.biopama.org).



Hyacinth is a national of Trinidad and Tobago who has significant experience in designing, managing and implementing environmental

projects within the Caribbean. Prior to working with IUCN, she mentored a community-based organization through implementation of a GEF-SGP funded project, "My Island My Community: Increasing Awareness and Changing Attitudes and Behaviours on Climate Change and Environment in Tobago." She also managed the International Coral Reef Action

Network's Coastal and Marine Management and Education in the Southeastern Caribbean project, which provided training, networking opportunities and financial support to marine protected areas in five Caribbean countries; and produced a short film showcasing the marine protected areas of the southeastern Caribbean.

In her new role, Hyacinth will oversee the implementation of the Caribbean component of BIOPAMA, a four-year, European Commission funded programme being implemented jointly by the IUCN, the Joint Research Centre of the European Commission (JRC) and the ABS Capacity Development Initiative (through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)). BIOPAMA aims to assist the African, Caribbean and Pacific (ACP) countries in developing a framework for improving technical and institutional approaches to conserve biodiversity, particularly in protected areas (both terrestrial and marine), through regional cooperation and capacity building activities.

CERMES, an IUCN member, will host Hyacinth during the execution of the BIOPAMA project. Hyacinth can be contacted at hyacinth.armstrongvaughn@iucn.org.

New CERMES PhD student

CERMES recently welcomed our newest PhD student, Ramon Husein to the family. Read about what he has to say about the research he will be conducting over the next few years.

"Ramon's research focuses on stormwater drainage system optimisation within a surface water catchment to achieve four objectives: flood mitigation, stormwater quality remediation, receiving water protection and stormwater harvesting. The practical application of his methodology focuses on modelling these Barbados case study catchments using the Model for Urban Stormwater Improvement Conceptualisation."

A second component of the research involves the development of a hydrological analysis methodology for the developing world. This

seeks to produce reliable design storm profiles in the face of parsimonious rainfall and runoff data for the safe and economic design of hydraulic infrastructure. This methodology also seeks to address challenges associated with climate change, urbanisation and population growth projections through the use of continuous simulation and probabilistic modelling of rainfall data.

Ramon completed the first phase of his research, including upgrade to PhD candidacy, at the University of Sheffield and continues to work in conjunction with Sheffield and the Ministry of the Environment and Drainage of Barbados."

Past CERMES student is a "Bank on Me" winner!

Extract from Nation News Barbados, nationnews.com



Heartiest congratulations to one of our former MSc students, Kristina Adams, for her success in the inaugural six-week Bank on Me reality television show.

"The owner of Adams' Aqualife, an aquaculture farm in St. Philip, came out on top of a field of 29 contestants to receive major sponsorship deals and other offers to get her business idea off the ground."

Kristina breeds red tilapia and red claw crayfish for distribution to hotels and restaurants on the island and one day hopes "to expand and sell frozen fish to supermarkets."

Kristina "walked away with a \$15,000 cheque from Scotiabank; \$80,000 in equity from Williams Industries; retail space in Satjay Mall valued at \$25,000; \$10,000 in advertising from CaribVision and \$10,000 worth of communications services from SFA Communications and more."

Good on ya Girl!

So long, until 2014

By Maria Pena

It certainly has been a busy and productive year for us at CERMES. Staff certainly racked up air miles participating in international and regional conferences, workshops and meetings. CERMES hosted and organised various conferences, workshops and meetings, with our Administrative, Technical and Support staff playing major roles in their success.

Our 2012/2013 cohort of students embarked on conducting research for their MSc research papers, some of whom will be submitting their work for examination by end of the month!...good work all. Our PhD students continued to work diligently on areas of research that have become integral parts of their lives. We will celebrate with them next year when most are due to complete their dissertations...you're nearly there, press on guys and gals! We welcomed our 2013/2014 group of MSc students to the family and continue to enjoy our time with them...we hope the feeling is mutual!

Our home, the CERMES building, underwent extensive renovation resulting in dislocation of most staff and all students during the construction period. Who could forget the incessant 'tata tata tata tata tata' of jack hammers?!!! Yet, we made it through and now have a wonderfully improved building with a heavily sought after new lecture room on the ground floor; spacious computer lab; additional office space for PhD students and Post-Docs; larger conference room and main Departmental office; and staff kitchen to boot!

On behalf of Patrick and all of us here at CERMES, I would like to thank all of you for keeping connected with us throughout 2013. We wish you an enjoyable and peaceful season and look forward to sharing our news with you in the new year.

