



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

1st Lionfish derby for Barbados

By Myles Phillips

The first ever Lionfish derby was organised by the Barbados Coastal Zone Management Unit (CZMU) on 24 May 2014 at Harbour Lights in Carlisle Bay. Teams from around the country participated in the derby, with professional fishermen and dive operators fishing alongside recreational divers from sunrise until 1pm. The teams brought their collective catch of over 200 fish to Harbour Lights to be weighed and counted by volunteers from the CZMU and CERMES, and competed for prizes including the biggest catch, biggest fish and smallest fish.



CZMU and CERMES volunteers.
 Photo credit: C. Bis sada

A representative of the Fisheries Division of the Ministry of Agriculture was also on hand manning an information booth from which he demonstrated handling procedures, fielded a number of questions from attendees and dispensed educational materials.

With the objective of encouraging Barbadians to begin to eat the highly prolific invasive species, the lionfish derby partnered with local chefs from popular restaurants to provide an impressive variety of lionfish dishes for the public to sample. Such culinary delights as lionfish sushi with cou cou, lionfish and saffron soup,

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grilled lionfish and lionfish pasta were well received by all attendees.

CERMES has been involved in lionfish research locally since 2012 through collaborative research with the Natural Heritage Department, Barbados Fisheries Division (FD) and the Coastal Zone Management Unit (CZMU). Under a three-partnered arrangement laid out by the NHD a Resource Plan was developed in which CERMES would conduct lionfish research, the CZMU would engage in public education, and the FD would collect specimens and conduct fisher training in safe handling of the species. Another outcome of this arrangement was a lionfish hotline initially managed by CERMES and lionfish Facebook page <https://www.facebook.com/pages/Lionfish-Barbados/252570021471424>.

With funding support from the NHD, UWI has documented the arrival and spread of lionfish around the island, examined population size structure and genetic origins, collected baseline data on reef fish catch rates and composition of species to quantitatively monitor the impact of this invasive species on the ecology and ecosystem structure and fisheries locally.

Preparing for SIDS and post-2015 sustainable development

By Patrick McConney

CERMES is taking keen interest in the post-2015 global

agenda and the crafting of the sustainable development goals (SDG) that have become intertwined with the SIDS process leading up to the Samoa third international SIDS conference in September 2014. Thus we were represented at the CANARI Expert meeting to analyse the Caribbean sustainable development agenda held in Port of Spain, Trinidad and Tobago, on 28-29 May 2014.



A diverse group of participants including youth leaders, current and former ambassadors, technical and academic professionals and treaty negotiators put their minds together with the aim of assisting the CARICOM engagement and achievements in the SIDS and post-2015 SD global processes. The leadership and initiative shown by CANARI to host this, and a series of related activities including webinars, was highly commended by all participants.

BIOPAMA Caribbean Programme update

By *Hyacinth Armstrong-Vaughn*

BIOPAMA The BIOPAMA programme has been ramping up its visibility in and support to the region over the last six months through the implementation of initiatives with in-country agencies, regional programs and projects. In the Bahamas, BIOPAMA is working with the Bahamas National Trust and their protected area (PA) counterparts to review and consider the application of the IUCN Management Categories to The Bahamas' system of PAs. If countries, PA agencies and NGOs are interested in learning more about this process please contact me at Hyacinth.Armstrong-Vaughn@iucn.org as there may be an opportunity for you to participate.

A key factor for BIOPAMA's success is the ability to partner with existing initiatives and programs in the

region. Partnerships were forged with the Caribbean Marine Protected Area Management Network and Forum (CaMPAM) and TNC's Eastern Caribbean Marine Managed Area Network (ECMMAN) Project, which resulted in the implementation of two events - a learning exchange for seven junior MPA Managers held in Belize in collaboration with CaMPAM; and a three-day workshop in February in St. Lucia hosted in collaboration with the ECMMAN project that delved into the data access and management challenges that countries face and that impact their decision-making ability for protected areas. At the end of the workshop, it was very clear that BIOPAMA can play a key role in providing some solutions to the challenges identified, through its Regional Observatory, and continuing to work closely with the ECMMAN project and other regional initiatives.



Alongside these capacity building activities, BIOPAMA participated in regional workshops, and held a lunch time event at, and supported the participation of colleagues from the Dominican Republic to attend the Mesoamerican Congress on Protected Areas held in Costa Rica from 19-21 March, 2014.

Information on BIOPAMA's activities can be found at http://www.biopama.org/where_we_work/caribbean/. Please share your stories, activities, and challenges with us through the BIOPAMA website and our discussion group at www.yammer.com/biopama.

Grenadines field trip

By *Roxanne Maclean*

On 3 June the Coastal and Marine stream at CERMES consisting of four students had the opportunity to travel throughout the Grenadine Islands, accompanied by Professor Robin Mahon, Dr. Patrick McConney, and Dr. Kimberly Baldwin. The trip was a component of the Managing Coastal and Marine Resources course and was focused on observing some critical issues and threats to the marine environment and how the marine

For more information contact:

resources are currently being managed. It involved a tight schedule of meeting with NGO groups, fishermen, entrepreneurs and the general public as well as visiting different sites to gain firsthand knowledge on marine issues.



Field tripping through the Grenadines

Starting in Bequia the group visited a boat museum, snorkeled two reefs, visited Old Hegg Turtle Sanctuary, and spoke with fishermen in Paget Farm. The following three days were spent on Union Island where students participated in a variety of activities such as a visit to the Tobago Cays Marine Park and attending a talk with members of Sustainable Grenadines Inc. Students also got to meet the ladies at the AMCO seamoss farm in Ashton and sample some of their delicious beverages. The final destination was Carriacou, Grenada where two days were spent doing various activities like snorkelling in Sandy Island/Oyster Bed Marine Protected Area and visiting the site of the Tyrell Bay Marina Project. Overall, the trip was a great success where students learned a lot and had some fun along the way!

Meet the Water Resources Management team

By The Water Resources Management Group

There's a movement occurring within CERMES and it's all about water resources. Since the beginning of the year, Adrian Cashman's Water Resources Management team has been steadily growing. Meet this impressive group in the next few paragraphs and learn what they are up to.

Jenna Blackwood is pursuing a PhD in Environmental Studies with a focus on Stormwater Governance and Management at the household level. She holds a

diploma in Architectural Technology, Bachelor of Landscape Architecture and is a graduate of the CERMES Coastal stream. Stormwater management (SWM) is a key component of landscape architecture and issues such as climate change, urbanisation and water security have made SWM more complicated and necessitate a review of the governance and management structures. She intends to document the enabling environment for SWM and household practices in three Caribbean islands as well as investigate the feasibility of a household-centred approach to SWM.



Jeanel Georges is a CERMES alumnus having completed her MSc in the Marine and Coastal Zone Management stream. Her research focused on an assessment of the Queen Conch fishery in Tobago. Currently, Jeanel works as an independent consultant on diverse projects including socio-economic studies and fisheries related research. She joined the Water-aCCSIS team as the Communications Officer to promote and facilitate communications, awareness and outreach on behalf of the project partners and stakeholders. Jeanel also assists with the WACEP (Water and Climate Education Programme) online short-courses, offered jointly by CERMES and the Columbia IRI, as Logistics Coordinator managing course participants, course delivery and assessing effectiveness of this pilot Programme.

Dr. Abd-Elaziz Gohar is a CERMES postdoctoral fellow. His PhD research in *Water Science and Management* with concentration in *Water Economic and Policy* from New Mexico State University (NMSU), USA, developed and applied hydro-economic frameworks to improve an understanding of science-based water policy applicable to Egypt and Afghanistan basins. Currently, he works with the Water-aCCSIS Project in helping the CERMES team formulate and develop an integrated water resources management approach that addresses the hydrologic, land use, urban use, economic, institutional, and ecosystem characteristics of selected Caribbean

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states. His major task is to develop a catchment-scale framework that investigates the consequences of different policy applications and institutional alternatives on the regional water demand, food security, and crop prices under different climate change and water scarcity scenarios.

Ramon Husein is a PhD Candidate in Natural Resource Management at CERMES. He graduated the University of Sheffield with a First Class BEng degree in Civil Engineering in 2011, and won the Barbados National Development Scholarship that same year to carry out research related to flood and stormwater management in Barbados. He upgraded to PhD candidacy at Sheffield in 2013, and has since returned home to complete his research. His academic work focuses on the application of a novel policy and planning framework for whole-catchment stormwater management, and is being tested through the application of stormwater quantity and quality modelling tools.

Anuradha Maharai is a Research Assistant in Water Resources Modelling at CERMES and is part of the Water_aCCSIS Project Team. She holds a BSc. major in Geology and minor in Geography and is currently at the end of an MPhil in Hydrogeology; all based at the Mona Campus, Jamaica. Her MPhil thesis focused on hydrologic flood modeling (surface water modeling) for the coastal town of Port Maria, Jamaica; the simulated return period flows of which will be used to better inform the future engineering designs for riverine structures in Jamaica. In her present capacity at CERMES, she is working on building a groundwater model for the Speightstown catchment in Barbados as well as assisting with the other work packages involving water availability modeling.

Tara Mackey has been working as a research assistant on two projects for the past eight months. The first project 'Identification of factors contributing to the deterioration and losses in the water distribution system in Barbados' is completed and the full report is available as CERMES Technical Report #68. For this project, a geographic information system (GIS) was used to locate potential 'hotspots' and pipes were ranked in terms of the need for and urgency of replacement. The second project 'Modelling the impact of climate change in a water scarce island context' is one of the components of the Global-Local Caribbean Climate

Change Adaptation and Mitigation Scenarios (GloLoCarSce). Tara's role is to model tourism water consumption, project total water consumption, and investigate the effects of climate change on the future water availability of Barbados. Tara holds a BSc. in Mathematics and Meteorology and is a graduate of the CERMES Water Resources Management stream.



L to R: Anuradha, Jeanel, Tara, Adrian, Ramon, Jenna, and Abd-Elaziz

Congratulations to an alumnus

By Leonard Nurse



Congratulations to Godfrey Scott, who was recently appointed as Project Coordinator for the National Land Reclamation Project, Ministry of Natural Resources and the Environment, Guyana. Godfrey, is a CERMES graduate of the 2011-2012

class. The aim of the USD 2.4 million project is to rehabilitate the lands at former mining sites, as an integral component of Guyana's Low Carbon Development Strategy. It also represents another important phase in the implementation of the UNFCCC-supported global greenhouse gas mitigation programme - REDD+ (Reducing Emissions from Deforestation and Forest Degradation).

Godfrey believes that his training at CERMES has prepared him well for the task ahead. The title of his Research Paper was, 'An Assessment of the Carbon Sequestration Potential of Degraded Mine Sites in Guyana: A Strategic Approach to Post-Mining Impacts and Climate Mitigation'. His research was supervised by Leonard Nurse.

For more information contact:



CERMES, University of the West Indies, Cave Hill Campus, St. Michael, Barbados

Phone: (246) 417-4316 Fax: (246) 424-4204; cermes@cavehill.uwi.edu; www.cavehill.uwi.edu/cermes