

An electronic bulletin about interdisciplinary research, teaching and outreach at the Centre for Resource Management and Environmental Studies (CERMES) Faculty of Pure and Applied Sciences, University of the West Indies Cave Hill Campus

In the lead up to the end of the second semester at CERMES, we have continued to be occupied with lecturing, preparations for research and internship projects as well as participation in regional and international projects and meetings. Please read on for a complete run down on our activities.

## **Land-based sources of marine pollution discussed in Cuba**

Dr. Hazel Oxenford was an invited participant to the United Nations Environment Programme and Centro de Ingenieria y Manejo Ambiental de Bahias y Costas (UNEP/Cimab) regional workshop "Coastal and marine water quality indicators and methodologies to determine pollutant loads in the wider Caribbean" in Havana, Cuba, 4-8 April. The workshop was held as recommended by the Interim Scientific Technical and



Advisory Committee to the Land-Based Sources of Marine Pollution (LBS) Protocol of the Cartagena Convention. The target participants were Government and/or Research Institution personnel responsible for, or active in, coastal water quality monitoring. The key objective of the workshop was to discuss methodologies applied to determining pollutant loads

from point and non-point sources of pollution, and to evaluate and recommend the coastal and marine water quality indicators that should be used regionally to assess the condition of coastal waters across the Wider Caribbean. In addition, there was information and knowledge sharing regarding the characterisation and quantification of municipal and industrial solid waste. The preliminary draft update of CEP Technical Report 33 "Land-based sources of pollution in the Wider Caribbean" was also reviewed.

## **Safety at sea**

Dr. Hazel Oxenford participated in a Safety at Sea training course at CFTDI in Trinidad (12-13 April) and obtained an international Certificate in Personal Survival Techniques (in accordance with STCW 95 Convention Section A-VI/1-1). This is now a standard requirement for anyone joining the crew of an

international research ship, and was part of Dr. Oxenford's preparation for joining the FAO-Lesser Antilles Pelagic Ecosystem research cruise in May 2006.

## **FAO-LAPE research cruise**

Dr. Hazel Oxenford participated in the second leg of FAO's Lesser Antilles Pelagic Ecosystem Biomass Assessment research cruise, spending two weeks (May 10 - 22) onboard the ultra modern research vessel "Celtic Explorer", as a member of the scientific team charged with documenting the vertebrate and invertebrate biomass of the waters within the EEZs of the eastern Caribbean islands. Collections were made using a midwater multi-sampler trawl net capable of fishing at three discrete depths



Trawl net with 3 cod-ends on aft deck of the Celtic Explorer

in a single tow. Trawl sets were made during the day and night hours on all of the different acoustic targets (e.g. dense schools and scattered layers) detected by the 24 hr acoustic monitors, and hundreds of different taxa (including fish, squid, tunicates, jellyfish and crustaceans) were caught from depths of between 20 and 600 m below the surface. A full cruise report will be published shortly by the FAO-LAPE project and many collaborative scientific papers are expected to result from the data collected.

## **Charting a new course for adaptive co-management**

Dr. Patrick McConney is participating as a research collaborator in the study: Charting the New Territory of Adaptive Co-management: Collaborating, Learning and Adapting through Complexity. The project team, lead by Canadian scientists with funding from several Canadian sources, consists of eighteen individuals. The aim of the study is to assess the changing directions of co-management research and to chart a new course for

adaptive co-management (ACM) within the frontier of complex systems theory.

## ***Student field trips***

During April and May, students in both the Coastal and Marine Resource Management and Climate Change Streams participated in field trips to the Grenadine Islands and Belize, respectively.



Exploring the abandoned Ashton Bay Marina, Union

Our Coastal students, along with Dr. Robin Mahon and Maria Pena, visited four Grenadine Islands – Bequia, Union Island, Mayreau, Carriacou and some adjacent marine areas such as the Tobago Cays from 20-

27 May 2006. The purpose of the trip was to broadly look at issues affecting natural resource management and sustainable development in these small islands, with an emphasis on both the technical and human aspects of management. Places of interest visited included the Old Hegg Turtle Sanctuary in Bequia, the abandoned Ashton Bay Marina Project to examine its impacts on the adjacent mangroves and tidal flushing of the area; the Tobago Cays for a snorkeling and diving expedition and to learn of the past proposal to privatize the Cays and the ensuing opposition from citizens and NGOs; and the marina project in Tyrell Bay, Carriacou to examine its potential impacts on the mangroves in the Bay.

The Climate Change students accompanied by Dr. Leonard Nurse and Neetha Selliah visited Belize from 28 April – 6 May 2006, and were hosted by Dr. Kenrick Leslie and the Community Climate Change Centre (CCCCC). The purpose of this eight day field trip was to investigate the effectiveness of various adaptation and mitigation measures to combat the impacts of climate change. Sites visited included the Monkey River village to



Coastal erosion in Monkey River, Belize

examine the impacts of sea level rise on coastal erosion and the potential loss of a village to the sea; the renewable energy village of San Benito Poite where electricity is generated through solar photovoltaic panels; carbon sequestration plots in the Rio Bravo Conservation Area; the Chalillo Dam to

examine the potential impact of climate change on the flow rates of the Macal River; and the Mountain Pine Ridge Forest Reserve to learn of the devastation of the Pine Bark beetle on the reserve and the impacts of climate variability on this outbreak.

## ***Ecosystem approach to managing fisheries***

Dr. Patrick McConney attended an FAO Expert Consultation on Economic, Social and Institutional Considerations of Applying the Ecosystem Approach to Fisheries Management in Rome, Italy, from 6-9 June 2006. The international consultation drafted outlines of what a technical paper and guidelines on this topic should contain. These documents will be published by FAO in due course.

## ***Grenadines Marine Space Use Information System (MarSIS): Part 2***

CERMES PhD candidate, Kim Baldwin, has recently completed her preliminary marine resource user data scoping trip for the Grenadines MarSIS project. During May 2006, the Grenadine Islands were visited to better understand the existing marine resources, their uses, users, infrastructure and current management as well as to identify areas for further exploration during the project. The project was introduced to community leaders and various marine resource users of the Grenadines. Kim will be returning to the Grenadines later this month with two CERMES MSc Coastal Resource Management students to conduct socio-economic and livelihoods analyses of all marine resource users in the Grenadines throughout the summer.



## ***CERMES adds two professors to teaching staff***

Heartiest congratulations to Robin Mahon and Hazel Oxenford on their recent UWI promotions from Senior Lecturer to Professor on in May 2006.

## ***New publications***

Just hot off the press:

Mahon, R. 2006. On the role of consulting in fisheries development. *Marine Policy* 30: 593-596.

CERMES 2006. Distributed governance, policy networks and maximizing opportunities for informed decision-making – Part 1. *CERMES Policy Perspectives*. 4p.