

REGIONAL TRAINING WORKSHOP IN ENSEMBLE CLIMATE MODELLING:

The Science of Climate Change and Climate Change Vulnerability, Adaptation and Mitigation (TSOCCCCVAM)



August 20 – 29, 2012

The Department of Physics

The University of the West Indies, Jamaica

A Special Welcome to Jamaica

- Special welcome to all our participants today from across the Caribbean Region.
- The Climate Studies Group (CSGM) and the Institute of Meteorology (INSMET) are pleased to host this 8 day modular certificate course for you
- As you embark on this journey, we hope that these next 8 days will be productive and that you will leave here having gained a lot of practical information for use in the various sectors and communities that you work in
- My name is Tracy-Ann Hyman and I along with Cherri-Ann Scarlett will be coordinating this workshop with the CSGM and INSMET groups

Climate Studies Group Mona (CSGM)

CSGM was formed in 1994 to investigate climate variability and climate change in the Caribbean region. It has become a leading research group in the Caribbean with a mandate:

- To promote awareness of global change and to determine how climate change due to global warming will manifest itself in the Caribbean region.
- To investigate and understand the mechanisms responsible for the mean climate and extremes in climate in both Jamaica and the wider Caribbean.
- To use this understanding to predict climate on a seasonal and annual basis.

Institute of Meteorology - INSMET

- is responsible for operating the Meteorological Service in Cuba. It is also a training and research institution in the fields of Atmospheric Physics and Chemistry, as well as Climatology, Agrometeorology and Marine Meteorology.
- INSMET was created in 1965 with the goal of providing accurate and reliable meteorological and climate information for the benefit of the Cuban society. To achieve this goal, INSMET has developed a successful strategy which combines training with research activities in order to improve the meteorological services.
- INSMET is a pioneering institution which has been responsible for the investigation of climate impacts in Cuba and the conducting of adaptation assessments at the national level. They have extensive experience using mesoscale models (such as ARPS, MM5, RegCM3) for weather forecasting and climate projections.

Introductions

- CSGM & INSMET teams: Name & Role
- More Detailed Information can be found online under

Who We are

Background to the Course

- Small Island Developing States (SIDS) have peculiar characteristics which make them especially vulnerable to the effects of climate change (Mimura et al., 2007)
- Some of these challenges include high transportation and communication costs, high import costs, a lack of economies of scale, susceptibility to natural disasters and climate related events and a heavy dependence on a limited natural resource base e.g. agriculture, fishing, tourism and mining

Background to the Course (Con't)

- Due to the climate sensitivity of the region it will be affected by **Climate Change**. It is therefore important that decision makers at the regional, national and local levels have specific and accurate data on the likely impacts of Climate change especially for the respective sectors
- Some of this knowledge however hinges on information provided from future projections of Caribbean climate, with these future projections coming from climate modeling efforts.
- The challenge is that some decisions makers do not use available modeled data for a variety of reasons, including
 - *insufficient understanding of the data or the process to acquire the data,*
 - *skepticism about inherent limitations and uncertainties associated with the data,*
 - *lack of knowledge about how to apply the data in specific sector contexts*

WORKSHOP OBJECTIVES

To provide workshop participants with:

- the knowledge and capacity to use climate models and their outputs to determine more precisely climate change impacts on the agriculture, water, coastal (*fisheries, tourism*) and health sectors in the Caribbean Region
- the know-how of using the outputs from climate models with appropriate decision tools, so that the identified sectors can better adapt and/or mitigate climate change.



Course information

Structure

This course is broken down into different themes as seen on the timetable:

- 1. Climate Change Basics – Day 1**
- 2. Modelling and Projections – Days 2-4**
- 3. Climate Change Issues – Day 5**
- 4. Vulnerability – Day 6**
- 5. Adaptation – Day 7**
- 6. Mitigation – Day 8**

STRUCTURE Con't

- The sessions will be delivered by INSMET and CSGM personnel, as well as experienced Industry and Academic personnel. All information on Speakers can be found online
- Our presenters will emphasize **methodological processes** and **case study applications** that can be replicated in planning and decision making processes within sectors.
- These sectors will include- *but are not limited to*- Agriculture, Fisheries, Tourism, Water, Health and Biodiversity.
- To make this course of regional relevance, we have focused a lot on Caribbean specific data and outputs

Course Principals

- Dr. Michael Taylor - Climate Studies Group Mona (CSGM), Jamaica
- Dr. Abel Centella - Institute of Meteorology (INSMET), Cuba

TEACHING METHODOLOGY

This course will be delivered through a combination of

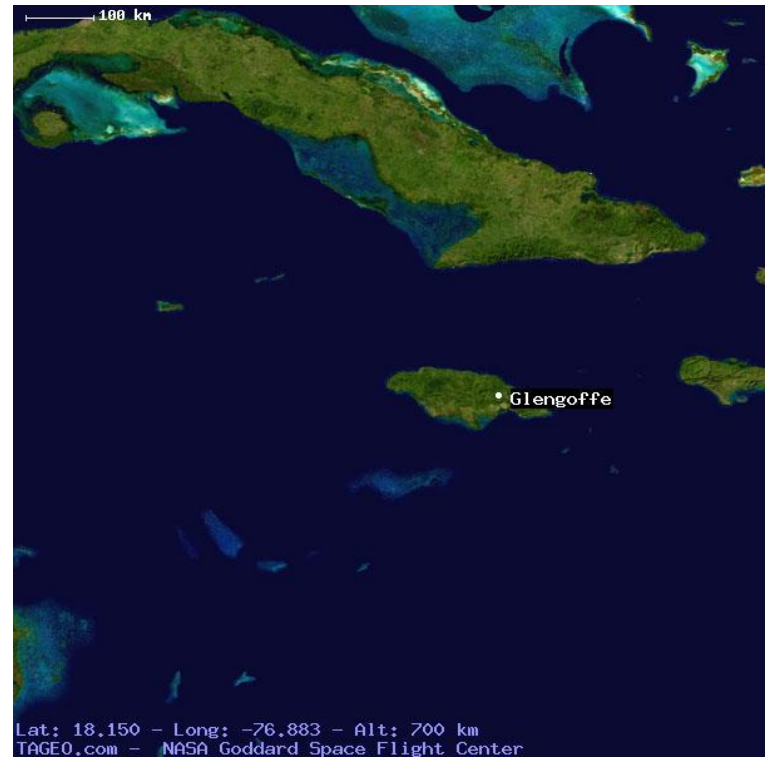
- lectures
 - interactive exercises
 - discussions
 - case studies applications
 - assignments
 - and a field trip
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- Lectures and exercises will be posted online at the end of each day
 - Lectures will cover the theoretical aspects of the course, while exercises will reinforce key points.

Field Trip

Glengoffe St. Catherine

Glengoffe Climate Change Adaptation Project

- **Soil Conservation**
- **Drought Mitigation**



Assessment

The course assessment will include a final test to be delivered electronically and participants will be awarded a

Certificate of Completion /participation OR

Certificate of Merit

Certificate of Distinction

Online Information

- Course Website:
<http://myspot.mona.uwi.edu/physics/>
- Internet access codes –
- SSID: Climate-services
Password:54climate32
- Workshop e-mail
csgmworkshop@gmail.com

Operations & Housekeeping

Operation

The Sessions will be delivered in two locations

- 1. Lecture Room B**
- 2. Virtual Lab**

It will depend on the exercises each day, so we will update you accordingly

Housekeeping

- Registration packages – pens, note paper, timetable, course objectives
- At the end of the workshop you will also receive on Jump drive, a manual with the information from the workshop
- We start 9am sharp each morning and we ask that you sign the attendance register each day
- Coffee breaks and Lunch will be served daily and we will direct you to these areas
- Bathrooms are found on the Ground Floor of the Electronics Building
- We have signs up, so that you can find these areas
- Cell phones - turned off / placed on vibrate during sessions
- If you have to use the phone, we ask that you do so outside and not while the sessions are going on

- We have put together a fact sheet for persons who are not familiar with Jamaica, so let us know if you need one
- Feel free to come to us should you have an challenge, questions etc.

Participant Introductions

- *Name*
- *Country*
- *Position*
- *Company / Industry*

Introduction of Moderator

- Dr. Tannecia Stephenson is a lecturer in the Department of Physics and a member of the Climate Studies Group, Mona. Her research interests are Caribbean climate variability, climate extremes, seasonal predictions using statistical models and statistical downscaling.
- She has been affiliated with a number of climate variability and change projects and has published a number of journal articles, technical reports and short monograph with collaborators. Her work experience includes conducting research as a visiting fellow at the Climatic Research Unit at the University of East Anglia in the United Kingdom
- DR. TANNECIA STEPHENSON