

Project Steering Committee Meeting  
Second National Communication  
Friday, November 27<sup>th</sup>, 2009 at 10 am  
The BEST Commission

**MINUTES**

Present – Gail Outten-Moncur (NEMA), Arthur Rolle (Department of Meteorology), Jeffrey Simmons (Department of Meteorology), Graham Sem (V&A Team Leader), Philip Weech (BEST Commission), Stacey Moultrie (Project Coordinator), Tamica Rahming (Bahamas National Trust), Michael Stevenson (College of The Bahamas), Richard Cant (Water & Sewerage Corporation), Lisa Benjamin (College of The Bahamas)

**1. Welcome & Introduction of Dr. Graham Sem**

Mr. Rolle welcomed everyone and introduced Dr. Sem as the Vulnerability and Adaptation Team Leader.

**2. Minutes**

Dr. Cant asked if the letter to Ministry of Tourism about concerns with CaribSave had been issued by BEST as requested by the PSC. Mr. Weech confirmed that the letter did go out and he did speak with the Director-General about the Committee's concerns. Following his discussion with the Director-General, the Ministry appointed Mr. Earlston McPhee to join the PSC.

Mr. Rolle introduced the new members of the PSC – Michael Stevenson and Lisa Benjamin of the College of The Bahamas (COB) and Gayle Outten-Moncur of the National Emergency Management Agency (NEMA).

**3. Update on Vulnerability & Adaptation Assessment**

Dr. Sem gave an update on the V&A assessment to date. There has been a kick-off workshop of the V&A assessment; the report of that workshop will be provided to Committee members. One thing discussed at that meeting was what mechanism should be used to conduct the V&A assessment in The Bahamas. That meeting also concluded that there should be another meeting specifically to discuss the methodologies that could be used.

The follow-up methods meeting was held in October. The six sectors to be assessed will be tourism, agriculture, forestry (and biodiversity), energy, water resources and human settlement & population. The participants went through the tools available. Two are already being used in The Bahamas – PRECIS and SLOSH which are being operated by the Department of Meteorology. The group also looked at TrainCLIM and the option of doing a vulnerability analysis of the country through consultations and interviews. What was

concluded at the meeting was that a combination of the four methodologies would be best for The Bahamas. One key data need for using these tools is the Data Elevation Model (DEM) for The Bahamas. We are still looking within country to see if any agencies here have DEM data. Department of Meteorology had previously collected some data with the consultant, JD Barnes. Sem has contacted Bahamas National GIS Centre (BNGIS) twice and they referred him to BEST, Department of Meteorology and the Water & Sewerage Corporation for data.

He has also contacted persons he knows about DEM with good enough resolution. They were able to find 30m resolution for some islands of The Bahamas. He suggested Grand Bahama, New Providence, Andros, Abaco, Eleuthera, Inagua, Cat Island and Exuma when his contacts asked what islands he wanted data for. They sent him the cost which is way beyond our means, but he has asked them to reduce to try to come within our budget. He asked the Chair for a decision on priority islands if we have to choose which ones to map based on budgetary constraints. The model will use Bahamian sea level data and build a DEM for terrestrial and marine areas; his contacts noted that the smaller the islands, the more difficult they will be to map.

The other important activity that resulted from the methods workshop was the need to complete a sectoral analysis. Physical Planning will hand their report in on human settlement by Monday. COB is working with agriculture. Energy (BEC), water resources (WSC) and forestry (Christopher Russell) are completed. Moultrie has worked with the Bahamas National Trust for their contribution to forestry/biodiversity.

Millar noted that with scientific permits, researchers are required to submit any GIS data they collect. She wanted to know whether this data would be useful to input into the SimCLIM or DEM. Sem noted that one issue with setting up DEM will be intellectual property which will involve an agreement between the Government and the persons developing the model. Millar cited a specific example of a 20-year hydrological study with comprehensive GIS data that has been ongoing in San Salvador and wanted to know if this type of data would be useful. Weech suggested she submit it to Dr. Cant and it could possibly be useful to the process.

Rolle also noted his communication with a graduate student who wanted guidance on what climate change research is needed.

Rolle noted that a contact gave us a site to download DEMs, but Ms. Russell who is downloading the information is off for a while; she will be back on December 15<sup>th</sup> and information should be ready then. She should be able to advise shortly on overlaying the JD Barnes information. Rolle noted that we need to align any new work with islands already done by JD Barnes. JD Barnes resolution is about 20 feet and work being done by Russell may take us down to 10 feet. Weech suggested that we may wish to go down to 5 feet. Rolle

noted that Global Earth Observing System (GEOS) has 30 years of data on vegetation for The Bahamas which is collected using satellite imagery; we would need to write to them and request the data. Weech noted we would need data about coral reef extent, bathymetry (for all the major banks), wavelengths which would indicate water depth, seagrass and coral reef occurrence, vegetation, wetlands, sea surface temperature; Mr. Rolle would follow up with GEOS about this. Sea level data exists for Nassau Harbour, Lee Stocking Island, Settlement Point (Exuma) and Inagua. Rolle noted that accessing Inagua data will require going there and downloading data.

There was discussion about prioritization of islands and the conclusion was:

1. New Providence
2. Grand Bahama
3. Andros
4. Abaco
5. Exuma
6. Eleuthera
7. Long Island
8. Inagua
9. Cat Island
10. San Salvador
11. Acklins & Crooked Island
12. Mayaguana
13. Ragged Island
14. Biminis, Berry Islands, Rum Cay and Conception Island

The New Zealand company that Dr. Sem has contacted can build an open model system. They would provide site licenses and these cost monies. A site license is to upload and download data and the company will have a relationship with the agency managing it to provide technical support.

Once the synthesis report is complete and the model is built for DEM, we will have a working meeting to determine who will look at which sector on which islands and also to conduct training in inputting data. The training will take 5 days and will be pretty intensive. By that time, the system will also have other GIS layers, like where the roads are, tourist infrastructure and the like; perhaps this type of information can be accessed from BNGIS. This team will work on producing the V&A chapter for the SNC. The system may be focused at BEST or Department of Meteorology as the latter is working with modeling already. Persons will need to be charged with managing the system and inputting new data as it becomes available. The training should be in February depending on when the model becomes available and the V&A report should be finished by April.

Rolle would provide World Meteorological Organization (WMO) template and Public Education Strategy to Stevenson and Rahming for them to work on education and outreach materials about climate change so we can begin putting information out. Moultrie asked to be copied on the documents.

#### **4. Preview of Mitigation Component**

Rolle noted that he wrote to UNEP about a technology needs assessment. We need this completed to have technology transfer; he will follow up with Mark Ratger of UNEP in Copenhagen about this.

Sem and Weech met with industry in Grand Bahama about mitigation. There are a number of things going on and they were interested in being involved. Vopak and Grand Bahama Power Company were interested in alternatives and the latter was interested in being a part of the PSC.

Tentative dates for the mitigation assessment training is March 8 – 12, 2010 using LEAP. Rolle mentioned that Elliot would be good to have involved. Charles Heap based in Boston has been contacted about doing the training. The training exercise will involve doing the assessment as well. Key sectors to be involved will be energy, finance (economic development division of the Ministry of Finance), and VoPak. Rolle also suggested that the Central Bank be involved as they would have statistics. Sem noted the difficulty of data from Central Bank not being segregated so we do not know what is applicable to transport or energy or agriculture. We do not have good data for any sectors other than energy.

Moultrie was asked to follow up with Troy McIntosh on emissions data. Moultrie noted that he was supposed to get a quote about equipment that he needed to collect emissions data but he never did. Weech felt we needed to go top down rather than bottom up as McIntosh proposed.

Type of information needed from transport sector:

- Make up of vehicles and boating vessel fleets
- Number of vehicles by size

Rolle inquired on relationship between Department of Environmental Health Services (DEHS) and Grand Bahama Port Authority (GBPA) in regards to landfill. In the process of completing the inventory of fuel; we need to have information as disaggregated as much as possible.

Sem is aiming to finish the mitigation chapter by May 2010.

## **5. Report of Barcelona Negotiations**

Weech spoke about Barcelona. It was a further attempt to take the discussions in Bangkok to resolve issues. Progress was made on non-contentious issues like technology transfer. No progress was made on contentious issues like finance. There is a worry that there will not be a legally binding agreement and there will be no funding, but a political commitment to do something and provide some funding.

Subsequent to Barcelona, the US Government has indicated that President Obama will be there doing the first week but not the second. The US has proposed 17% reduction in emissions with 2005 base, not the preferred 1990 base year. This means business as usual. China and Brazil have made encouraging statements.

## **6. Plans for COP15 in Copenhagen**

There are about 4 different levels of negotiation taking place – Executive Secretary is doing negotiations, Prime Minister and Minister of Environment of Denmark are involved in different sets of negotiations, US has reached out to Brazil, China and India, and EU has reached out to several countries. The Bahamas delegation will include Minister Deveaux as functioning head of delegation, Doug Bell from Bahamas Maritime Authority, Tishka Fraser from Ministry of Foreign Affairs, Philip Weech, Arthur Rolle, Prime Minister Ingraham and Teresa Butler from Office of the Prime Minister for High-Level segment. The COP will occur from Dec 7 – 18, 2009. Seven separate meetings will be occurring at the same time.

PM Ingraham is presently in Trinidad attending CHOGM this week at which there is a separate meeting for climate change.

The Bahamas faces problems because of aviation and IMO conflicts with bunker fuel proposal to be determined at Copenhagen. He believes funding for technology transfer will be sorted out and thus the importance of the technology needs assessment.

No one knows what the outcome of Copenhagen will be, but it will probably be agreed on the last night at the Prime Ministerial level.

## **7. Any other business**

Next meeting date was set as Friday, January 29, 2010 at 10 am.

Meeting adjourned – 12:10pm