



SDU News

Sustainable Development Unit Newsletter

Issue 2 — Climate Change Adaptation in the Cayman Islands

What is the SDU?

The Sustainable Development Unit (SDU) at the DOE was set up in July 2006 to spearhead the formation of a **national policy-level strategy for sustainable development**. This was in reaction to the expanding advisory nature of the DOE on environmental best practices and obligations under various Multilateral Environmental Agreements that **require integration of physical, economic, social and environmental development planning policies**. To date the SDU has worked on a National Sustainable Development Framework, draft National Conservation Law, the draft Grand Cayman Development Plan, revised National Tourism Management Policy, Go East Initiative, National Assessment of Living Conditions study and Public Health Review, the Enhancing Climate Change Adaptation in the Caribbean (ECACC) project, implementation of the Kyoto Protocol, and continues to advise on planning and coastal works applications.

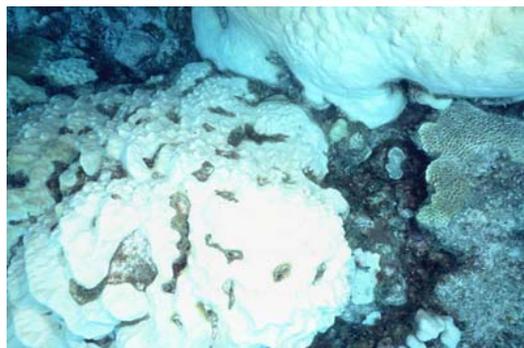
What are the Risks to the Cayman Islands from Climate Change?

The impacts of climate change, and more specifically of **global warming**, are expected to pose risks that will be keenly felt by small islands such as the Cayman Islands.

Rising land and sea surface temperatures are melting ice caps and ice sheets, and causing thermal expansion of our oceans, leading to **a rise in sea level**. The Cayman Islands are low lying and therefore **particularly vulnerable** to even small increases in sea level which would lead to increased flooding and loss of land, salt water inundation of fresh water aquifers and inundation of sewage systems.

Rise in sea surface temperature in the Caribbean is also expected to cause an **increase in the intensity of tropical storms and hurricanes**, in fact this trend is already being observed. Buildings, especially those sited on the coast, will therefore be at greater risk, and **beach erosion** will be more severe. The risk of **flooding** will also be higher. Combined with a rise in sea level, the impacts from **increased storm surge** will be that much greater.

Rises in sea surface temperature and sea level also spell **problems for Cayman's coral reefs**. Stronger storms will **damage reefs**, and warmer seas coupled with increased ocean acidification from more dissolved CO₂ will



Coral bleaching event, 1998

reduce productivity of reef systems, alter marine food webs and **increase susceptibility to disease, bleaching events and death**.

This all creates **economic, social and environmental problems for the future**. In fact the **cost of making preparations** for these expected impacts now, is likely to be **considerably less** than the costs that will be borne from doing nothing or delaying our response. This is why **putting in place measures to adapt now** to the expected impacts of climate change **by reducing our vulnerability to the risks** is so important.



Regional and National Involvement — Increasing Our Ability to Adapt to the Risks

Given the unavoidable risks of climate change to the region, **building capacity to adapt** has been the goal of **regional CARICOM initiatives** since 1997. The British Overseas Territories were not involved in these programs until the UK Department for International Development (DFID) approved a 3-year long **Enhancing Capacity for Adaptation to Climate Change (ECACC) in the Caribbean Overseas Territories (OTs)** project in April 2007, with the Caribbean Community Climate Change Centre (5Cs) as the Executing Agency. The project was officially **launched at a Cayman Islands-hosted workshop in November 2007**, with all five UK Caribbean OTs represented.



The ECACC project is designed to assist Overseas Territories in planning and implementing measures to adapt by building capacity to **assess and reduce** vulnerability to climate change. This is done through **gathering necessary data**, putting in place monitoring programs to assist the data collection efforts and **implementing vulnerability and capacity assessments (VCAs)** for the major sectors that will be impacted – Tourism, Water and Agriculture. Outcomes from these VCAs will be used to develop **policies** to reduce existing and future climate change vulnerabilities. The project will culminate in a comprehensive **National Climate Change Adaptation Strategy** which will aid the formulation and implementation of policies to help the Cayman islands adapt to the impacts of climate change. This should result in the mainstreaming of climate change issues, making it an automatic consideration in future decision making and planning processes. A **Public Education and Outreach (PEO) strategy** will also be developed to support awareness of and garner consensus on the national adaptation strategy.

Following the launch of the project, a **National Climate Change Adaptation Working Group (NCCAWG)** was



UK OT reps at the ECACC project kick-off, November 2007

formed in the Cayman Islands in December 2007 to **administer, plan, monitor and evaluate activities** under the ECACC project. Drawing on the range of expertise that currently exists in the Cayman Islands Government, the

In Depth: Mangrove replanting — doing our bit to adapt

The ECACC project is helping the Cayman Islands structure its response in adapting to climate change and identify the most appropriate interventions needed. Some adaptation responses are already taking place. One example is the mangrove replanting in South Sound carried out by the DOE and Reef Ball Foundation in May and June 2008.



The mangrove nursery and transfer of mangrove saplings to the Reef Balls at Cayman Islands Sailing Club

A mangrove nursery had previously been established at the Cayman Islands Sailing Club in Red Bay, and volunteers helped introduce mangrove saplings into Reef Balls, which were used to protect and anchor down the young plants once they were positioned in the Sound.

Mangroves offer protection to the coastline by acting as a buffer, dissipating storm surge and energy of storm waves, hence they are valuable resources for enhancing coastal resilience to the risk of more intense storms associated with global warming.



Mangroves being replanted in South Sound



group is currently composed of stakeholders from across 15 government ministries, departments and agencies, demonstrating the cross-sector nature of climate change issues. This group will **continue to function in addressing climate change adaptation issues and the implementation of an adaptation strategy** after the 3 year term of the project. The SDU acts as the liaison for the working group with the 5Cs, whilst also chairing the group and coordinating the initial set up of each project component.

Since its formation, the NCCAWG has assimilated expertise from visiting speakers, including a presentation in January 2008 by Dr. Robert Muir-Wood, Chief Researcher and Executive Vice President of Risk Management Solutions, on **climate change risks, insurability and building resilience in government policy** and a presentation by Dr. Murray Simpson from Oxford University Centre for Environmental Change in September 2008 on **Sustainable Tourism in the Caribbean and it's links to climate change adaptation**. Members have also attended workshops in



The NCCAWG inception meeting in December 2007

Guyana and Reunion Island on **Climate Change Impacts on Agriculture** and **Climate Change and Biodiversity** respectively.

The group has compiled a **climate and environmental monitoring data inventory** for the Cayman Islands, now deposited with the 5Cs. The NCCAWG has also initiated the **Vulnerability and Capacity Assessment component** of the project. Its members will have a key role in carrying out and coordinating the tasks identified to complete the assessment.

Assessing Vulnerability, Creating a National Strategy

A workshop was held on 21st and 22nd October 2008 on Grand Cayman for **Vulnerability and Capacity Assessment (VCA) training**, delivered by Dr. Neville Trotz, Scientific Adviser to the 5Cs, and Mr. Ottis Joslyn, regional consultant to the 5Cs.

The workshop was focused on the Cayman Islands' **tourism sector** and discussions amongst participants scoped the **critical issues affecting this sector** that need to be addressed in the assessment. A range of stakeholders from the public and private sectors were involved.



Dr. Neville Trotz and Mr. Ottis Joslyn from the 5Cs

The issues identified in the workshop were then **incorporated into a draft tourism VCA work plan**, which details the various tasks to be completed and outputs needed to aid the creation of a National Climate Change Adaptation Strategy. These outputs include a **literature review** of existing policies and regulations, **static risk maps and risk profiles** to determine the areas most at risk, identification of **data gaps** that need to be filled to assess the issues identified and **entry points for implementation** of recommendations into existing

policies. The next steps will be to finalise the VCA work plan and then start its implementation.

From 21st–23rd January 2009 Dr. Trotz, representing the 5Cs, and two consultants hired by the 5Cs, Mr. George de Berdt Romilly and Ms. Judi Clarke visited Grand Cayman to commence the initial consultation on the **National Climate Change Adaptation Strategy**. A series of **stakeholder interviews** with government ministries, departments and agencies and private sector participants were held, covering tourism and commerce, water, agriculture, hazard management, critical infrastructure, banking and insurance, and construction and real estate.

The meetings were used to **identify the critical issues that need to be addressed in an Adaptation Strategy** using the views of the full range of stakeholders interviewed. This will **set the context** for the development of the strategy, set out initially in an "Issues Paper", against which appropriate interventions will be formulated. Stakeholders were also asked for input on the development of the Public Education and Outreach strategy, which will support the development of the Adaptation Strategy and its eventual implementation.

Once the Issues Paper has been completed and feedback given and incorporated, the team of consultants will visit Grand Cayman again to aid the future stages of strategy development, which is anticipated to be concluded in a year's time.

Contact Info

For further information regarding the work being undertaken by the SDU, please contact us at doe@gov.ky or by phone on 949-8469.