

# Achieving a Low Carbon Climate-Resilient Economy: Cayman Islands' Climate Change Policy

## Executive Summary



Produced by the National Climate Change Committee for presentation to the Cabinet of the Cayman Islands

Final Draft – September 2011

## **Achieving a Low Carbon Climate-Resilient Economy: Cayman Islands' Climate Change Policy**

This policy will facilitate the transition to a climate-resilient, low-carbon economy by implementing measures that will:

- Reduce Greenhouse Gas Emissions, in line with agreed national targets, through promoting energy conservation, reducing energy use and encouraging greater use of renewable energy;
- Enhance the resilience of existing critical infrastructure to climate change impacts, while avoiding the construction of new infrastructure in vulnerable areas or with materials prone to climate hazards;
- Promote water conservation and improved rainwater harvesting while reducing impacts from flooding and enhancing the resilience of natural water resources;
- Enhance the resilience and natural adaptive capacity of terrestrial, marine and coastal biodiversity and ecosystems;
- Minimise the vulnerability of insured and mortgaged properties to climate change impacts;
- Strengthen food security by promoting increased use of locally produced food products and appropriate technologies, and
- Create and maintain a more environmentally responsible tourism industry while enhancing the resilience of tourism infrastructure and facilities to climate change impacts.

The following interventions will be implemented within 5 years of the adoption of this policy.

### ***1. Marine & Coastal Resources***

In order to *enhance the resilience and natural adaptive capacity of marine and coastal ecosystems by increasing protection and reducing local impacts*, the Government of the Cayman Islands will undertake the following tasks:

#### **1.1. Legislation and Policy Actions**

- a) Enact a National Conservation Law with accompanying regulations;
- b) Amend development and planning legislation to address climate change and natural disaster risks, which should include:
  - increasing site-specific coastal construction setbacks to take account of climate change, other hazards and coastal dynamics while protecting traditional access rights;
  - establishing appropriate and region-specific coastal construction setbacks for mangrove shorelines;
  - new coastal developments incorporating measures to mitigate the impacts of climate change, e.g. “wash-through” ground floors;

- o revising Part IV, of the Development and Planning Law (2008) to include adequate coastal setbacks and climate change risk management measures as reasons for refusing applications (and therefore not subject to compensation);
  - o revising the Development and Planning Regulations (2006) to establish effective control over sand and ballast;
  - o requiring coastal setbacks to be determined from a setback line (see BRAC Report (2003) for recommendations), as opposed to the high water mark, and
  - o for mangrove coastlines, amend the definition of the high water mark in the Land Surveyors Regulations to refer to the extent of tidal inundation.
- c) Enact new regulatory control measures to reduce harmful pollutants entering the marine environment;
  - d) Develop a Seven Mile Beach re-nourishment contingency plan (see BRAC Report), and
  - e) Adopt Florida DoE Mangrove Trimming Guidelines.

#### 1.2. Research, Monitoring & Education

- a) Monitor & control land-based sources of pollution on reef systems and fish populations;
- b) Monitor and control overfishing of fish species, and
- c) Enhance coral reef monitoring programmes.

#### 1.3. Environmental Best Management Practices

- a) Implement appropriate sections of the Cayman Islands *Species Action Plan (2009)* for marine turtles and grouper and the *Habitat Action Plan (2009)* for coral reefs, mangroves, pools, ponds and lagoons;
- b) Implement appropriate recommendations from the *Beach Review & Assessment Committee Report (2003)* and *Environment & Coastal Zone Management Special Issue Committee Report (2002)*;
- c) Assess potential flooding threats for mangrove areas and undertake timely drainage of impounded mangroves, where appropriate;
- d) Expand mangrove replanting programmes in conjunction with a review of mangrove high water mark delimitation, or with provision that replanted mangroves are not to subsequently be developed;
- e) Utilize the Environmental Protection Fee Fund for conservation of vulnerable coastal and marine resources, and
- f) Integrate hazard mapping and climate change risk management as part of the physical planning process.

## **2. Terrestrial Resources**

In order to *enhance the resilience and natural adaptive capacity of terrestrial biodiversity/resources*, the Government of the Cayman Islands will undertake the following tasks:

### **2.1. Legislation and Policy Actions**

- a) Enact a National Conservation Law;
- b) Implement the *Cayman Islands National Biodiversity Action Plan (2009)*;
- c) Implement recommendations of the *Environment & Coastal Zone Management Special Issue Committee Report (2002)*, and
- d) Update current Plant Quarantine Legislation to adequately address risk of increased invasive species.

### **2.2 Environmental Best Management Practices**

- a) Continue to collect specimens under the seed bank project (Kew Gardens), and
- b) Investigate carbon offsetting schemes for possible habitat protection benefits.

## **3. Energy Security**

In order to *promote energy conservation, reduce energy use and encourage greater use of renewable energy*, the Government of the Cayman Islands will:

### **3.1. Legislation and Policy Actions**

- a) Formulate and adopt a *National Energy Policy (NEP)* – which will seek to, amongst other things:
  - o reduce the country's carbon footprint in line with agreed national targets;
  - o diversify energy supplies including the development of renewable resources, and
  - o encourage and promote energy conservation and efficiency throughout public and private sectors
- b) Establish a national GHG emissions reduction target, assisted as appropriate by UK and other relevant expertise;
- c) Develop and adopt an energy code and supporting legislation aimed at increasing energy efficiency in new buildings across all sectors, with a particular focus on efficiency requirements for cooling systems;

- d) Adopt energy efficiency standards for appliances (e.g. Energy Star), equipment (e.g. air conditioning systems), building products and materials (e.g. R-value), and vehicles;
- e) Develop a comprehensive strategy for a national public transport system in the context of a National Transportation Plan;
- f) Enact traffic control legislation to promote the use of fuel efficient, low emissions vehicles;
- g) Provide incentives for the importation and use of building materials, products and technologies that result in higher energy efficiency, and
- h) Legislate the use of energy audits and explore their use in securing financing and attractive insurance rates for new buildings, and acquiring energy saving mortgages for retrofit of existing building stock.

### 3.2 Research, Monitoring & Education

- a) Test and update safety measures and hurricane contingency plans for critical infrastructure;
- b) Work with local utilities to create suitable programs (rebates, tax breaks, fee reductions, price disincentives) to encourage greater water and energy conservation and efficiency practices in the residential and commercial sectors and increase the use of renewable technologies;
- c) Develop programmes with the tourism sector to:
  - o Conduct energy audits of the Cayman Islands tourism plant;
  - o Reduce overall energy use from facility operations, especially demand for cooling;
  - o Provide financial incentives and technical assistance to achieve reductions, with particular emphasis on retrofitting lighting and cooling systems and installing renewable energy alternatives, e.g. solar water heating;
  - o Encourage tourists to conserve energy at their hotel or tourism facilities and attractions visited, and
  - o Provide opportunities for tourists to offset carbon emissions associated with their hotel stay or activities which benefit on-site or local energy conservation and efficiency programs or renewable energy initiatives.
- d) Establish public education and outreach programs to:
  - o Make the motoring public more efficient drivers and responsible vehicle owners, and
  - o Promote energy conservation and energy efficiency in the home and office, and increase awareness of the importance of systems maintenance to increase efficiencies.

### 3.3 Environmental Best Management Practices

- a) Climate-proof existing and planned fuel terminals and critical & vulnerable electricity distribution systems to reduce vulnerability to climate threats;
- b) Encourage architectural design of homes and other buildings that incorporates both active (HVAC, lighting) and passive strategies for cooling and lighting (e.g. natural ventilation, shading and day lighting);
- c) Promote mixed-use development to facilitate pedestrian and other non-motorized activities, and
- d) Establish incentives to encourage:
  - o the importation and use of smaller, more fuel efficient vehicles;
  - o the conversion of existing vehicle stock to use biodiesel where feasible;
  - o the importation and use of hybrid, electric and alternatively fuelled vehicles, and
  - o vehicle licensing fees tied to carbon emissions or fuel efficiency.

## **4. *Water Resources and Hydrology***

In order to *promote water conservation and improved rainwater harvesting while reducing impacts from flooding and enhancing the resilience of natural water resources*, the Government of the Cayman Islands will:

### 4.1. Legislation and Policy Actions

- a) Develop and/or implement comprehensive plans to alleviate current flooding problems which are to be reviewed by engineers and other relevant stakeholders;
- b) Implement the *National Biodiversity Action Plan (2009)*;
- c) Increase investment in storm water management programmes and move away from deep wells (towards other flood control methods, e.g. swales, retention ponds, etc. to complement deep wells) on a site by site basis;
- d) Develop and implement comprehensive regulations for proper storm water management;
- e) Revisit *Mosquito Research & Control Unit (MRCU)* and Development and Planning Regulations regarding the filling of reclaimed and low-lying lands (evaluate the need to fill entire parcel vs. filling of building footprint only and assess standards for the overall height of filled land);
- f) Strengthen provisions for retaining in-situ vegetation on development sites within the Development and Planning Regulations, and
- g) Revise Water Authority Law to allow use of grey water for irrigation (especially at hotels, golf courses and other large-scale development), as well as reuse in buildings for toilet flushing, with adequate public health controls.

#### 4.2 Research, Monitoring & Education

- a) Undertake a feasibility analysis for the expansion of centralized sewerage system(s) for the Islands;
- b) Incentivize and encourage investment in renewable alternatives to fossil fuel-based production systems such as solar powered desalination technology;
- c) Establish public education and awareness programs to promote water conservation and recycling;
- d) Establish incentives to promote rainwater catchment systems being used in new construction (or added to existing buildings), and
- e) Enhance & enforce development controls over the use and abstraction of underground water.

#### 4.3 Environmental Best Management Practices

- a) Require new developments in wetland areas to retain a percentage of in-situ wetland, particularly freshwater habitats, by incorporation as landscape features and public amenities;
- b) Require new developments to minimize the extent of impervious surfaces by incorporating technologies designed to facilitate and increase infiltration (e.g. Grasscrete, porous concrete), and
- c) Expand rainwater harvesting, storage and distribution infrastructure and encourage (through economic incentives) new developments to incorporate these into schemes, with appropriate public health (especially mosquito) controls.

### **5. Food Security**

In order to *strengthen food security by promoting increased use of locally produced food product*, the Government of the Cayman Islands will:

#### 5.1 Legislation and Policy Actions

- a) Develop a *Food Security and Nutrition Policy* (focussing on Availability, Access and Utilisation);
- b) Establish land use and zoning policies to identify and protect agricultural land;
- c) Amend Development and Planning Regulations and guidelines (where necessary) to promote landscaping, soil preservation, community gardens and the planting of fruit trees,
- d) Establish locally funded crop insurance or a crop recovery fund, and
- e) Develop and enact stringent Food Safety Policy & Regulations.

## 5.2 Environmental Best Management Practices

- a) Conserve and protect water sources for agricultural production;
- b) Establish weather forecasting and early warning systems for farmers, and
- c) "Climate proof" air and sea port facilities, road networks and other critical infrastructure.

## **6. Critical Infrastructure**

In order to *enhance the resilience of existing critical infrastructure to climate change impacts, while avoiding the construction of new infrastructure in areas or with materials prone to climate hazards*, the Government of the Cayman Islands will:

### 6.1 Legislation and Policy Actions

- a) Revise Development and Planning Regulations and building code to include provisions for reducing flood and climate change risks;
- b) Integrate hazard vulnerability and risk assessments into development planning processes and utilize environmental impact assessments (EIAs) to assist with decision making;
- c) Implement remediation plans for chronic flooding 'hot spots';
- d) Establish coastal construction setbacks based on flood risk mapping;
- e) Vegetate buffer zones and establish other stormwater run-off controls;
- f) Promote adequate property insurance for home owners;
- g) Ensure adequate insurance for critical infrastructure and investigate insurance pool schemes for portions of infrastructure not currently insurable (e.g. distribution systems or replacement financing);
- h) Design new critical infrastructure intended as a hurricane shelter as multi-use shelters (passive survivability) to withstand Category 5 hurricane;
- i) "Climate proof" existing and future waste management sites and designate temporary waste collection sites for storage of hurricane debris/waste, and
- j) Develop and implement appropriate guidelines for seawall location and construction.

### 6.2 Research, Monitoring & Education

- a) Establish community-based vulnerability mapping and disaster planning;
- b) Undertake risk mapping to identify critical infrastructure/developments at risk;
- c) Design, cost and phase implementation of a national level sewerage system(s) with appropriately located pumping/lift stations and treatment facilities;
- d) Review Disaster Management Plans for district landfill sites and ensure the design and operation of future facilities consider climate change impacts, and



- e) Ensure Disaster Management and Emergency Response plans at all critical services are tested and upgraded regularly.

## **7. Tourism Sector**

In order to *create a more environmentally responsible tourism industry and preserve the quality of natural, historical and cultural attractions, while enhancing the resilience of tourism infrastructure and facilities to climate change impacts*, the Government of the Cayman Islands will:

### **7.1 Legislation and Policy Actions**

- a) Amend the Tourism legislation to ensure that applications for new tourism development are submitted to the Department of Tourism, Department of Environment and other relevant agencies for review and a climate change risk assessment, and
- b) Implement “no regrets” measures.

### **7.2 Research, Monitoring & Education**

- a) Undertake mapping to identify critical tourism infrastructure at risk and review current Hotel/Tourism zoning in highly vulnerable areas;
- b) Determine highest-risk areas and designate as ‘vulnerable’ zones requiring climate change risk management plans for tourism facilities;
- c) Diversify the Cayman Islands tourism product from ‘sun-sea-sand’ - enhance visitor experience (in broadest terms) by increasing the number and type of attractions, and
- d) Develop scheme for tourists to offset greenhouse gas emissions.

### **7.3 Environmental Best Management Practices**

- a) Implement the recommendations of the National Tourism Management Plan (2009-2013).
- b) Require tourism facilities to develop, implement and test disaster & climate change risk management and business continuity plans – attached to licensing of business;
- c) Require climate change risk assessment as part of inspection and licensing of tourism properties, and
- d) Cost-share beach re-nourishment projects with all beach front property owners.

## **8. Insurance and Financial Services**

In order to *minimize the vulnerability of insured and mortgaged properties to climate change impacts*, the Government of the Cayman Islands will:

### 8.1 Legislation and Policy Actions

- a) Enact legislation to establish a climate change reinsurance market in the Cayman Islands;
- b) Promote the establishment of climate change risk management protocols for the finance sector;
- c) Require all companies to file a Corporate Social Responsibility (CSR) statement to report their impact upon the environment and plans for reducing climate change risks and carbon footprint, and
- d) Reduce the exposure of the Cayman Islands insurance and financial services sector by updating the Building Code to address climate change risks.

### 8.2 Research, Monitoring & Education

- a) Identify Government assets located in climate change risk-prone areas and formulate and implement measures to reduce the vulnerability of such assets, and
- b) Work with regional institutions (e.g. CCCCC, CCRIF) to better define the Cayman Islands' risk profile and find affordable solutions to manage risk caused by natural hazards and climate change.

### 8.3 Environmental Best Management Practices

- a) Collaborate with the insurance and financial services sector to establish economic incentives for owners to climate proof existing and new buildings.