Turks and Caicos Islands
Climate Change Green Paper

Climate Change is in Your Hands!

Climate Change Committee
February 2011
TABLE OF CONTENTS

Introduction – Climate Change in the Turks and Caicos Islands ........................................... Page 3
What is Climate Change? .............................................................................................................. Page 4
Is Climate Change Affecting the Turks and Caicos Islands? ..................................................... Page 6
Observed Trends/Projections in the Caribbean Region ............................................................... Page 6
Climate Change Impacts ............................................................................................................. Page 7
  Impacts to the Fisheries Sector and Adaptation Strategies ....................................................... Page 8
  Impacts to the Tourism Sector and Adaptation Strategies ....................................................... Page 10
  Impacts on Biodiversity and Adaptation Strategies ................................................................. Page 12
  Impacts on the Agriculture Sector and Adaptation Strategies ............................................... Page 16
  Impacts on Water Resources and Adaptation Strategies ......................................................... Page 18
  Impacts on Human Health and Adaptation Strategies ........................................................... Page 20
  Impacts on Settlements and Infrastructure and Adaptation Strategies ................................ Page 22
Conclusion .................................................................................................................................... Page 24
INTRODUCTION: CLIMATE CHANGE IN THE TURKS AND CAICOS ISLANDS

The Intergovernmental Panel on Climate Change (IPCC) has confirmed that small, low-lying coastal developing states like the Turks & Caicos Islands are the most vulnerable to global climate change, and accompanying sea level rise. Responding to climate change risks (adaptation) is therefore important and demands the attention of all key stakeholders.

As part of the Turks and Caicos Islands ongoing efforts to strengthen private and public sector institutional capacities to respond to climate change, the Ministry of Environment and District Administration in collaboration with the Caribbean Community Climate Change Centre (CCCCC) and the United Kingdom Department For International Development (DFID) are developing a National Climate Change Adaptation Strategy and Action Plan and a Climate Change Public Education and Outreach Strategy.

This Green Paper is intended to serve as a platform to facilitate ongoing consultations with stakeholders in the public and private sectors and civil society on the implications of climate change for the Turks and Caicos Islands. It is hoped that this Green Paper will generate informed discussion about a viable climate change strategy for the Turks and Caicos Islands and ultimately lead to the development, adoption and implementation of such a strategy as a key pillar of national efforts to achieve sustainable development.

Let us Unite to Combat Climate Change in the Turks and Caicos Islands!
WHAT IS CLIMATE CHANGE?

Climate change has been described as “a change in climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods”. This phenomenon is now squarely on the global stage as one of the defining challenges of our time.

The Earth has a natural temperature control system. Certain atmospheric gases are critical to this system and are known as greenhouse gases (GHG). On average, about one third of the radiation that is emitted from the sun is reflected back to space. Of the remainder, some is absorbed by the atmosphere but most is absorbed by the land and oceans. The Earth’s surface becomes warm and as a result emits infrared radiation. The greenhouse gases trap the infrared radiation, thus warming the atmosphere and maintaining the warmth of Earth as shown in Figure 1 below.

Figure 1: Green House Effect
Naturally occurring greenhouse gases include water vapour, carbon dioxide, ozone, methane and nitrous oxide, and together create a natural greenhouse effect. However, human activities are causing greenhouse gas levels in the atmosphere to rise thereby resulting in a stronger or enhanced greenhouse effect, which causes the increase in the average global temperature (global warming).

A major greenhouse gas is carbon dioxide (CO₂). CO₂ concentrations in the atmosphere have been measured at an altitude of about 4,000 meters on the Peak of Mauna Loa Mountain in Hawaii since 1958. The measurements at this location, remote from local sources of pollution, have clearly shown that atmospheric concentrations of CO₂ are increasing. The mean concentration of carbon dioxide was approximately 316 parts per million by volume (ppmv) in 1958 and has risen to approximately 393 ppmv in 2010 as shown in figure 2.
OBSEVED TRENDS/PROJECTIONS IN THE CARIBBEAN REGION

1. Temperature: Temperature trends in the Caribbean over the past fifty (50) years have mirrored observed global warming trends, with rises in temperatures in the range of between 1.1 and 6.4 °C (2.0 and 11.5 °F) being projected during the 21st century by 2100.

2. Extreme Events: Climate change is projected to increase the incidents of extreme events (floods, droughts) and the intensity of hurricanes (a greater likelihood of category 4 and 5 hurricanes).

3. Sea Surface Temperature (SST): SST trends at some locations in the Caribbean nearly double those being observed over global tropical oceans. SST in the Caribbean Basin over the past two decades indicates that warming is taking place at between 0.2°C to 0.5°C per decade. The greatest increases in SST have been seen in the Windward Islands of the Lesser Antilles such as Grenada, St. Vincent and the Grenadines, Dominica and St. Lucia. If the average temperature of the Earth increases by 1.5°C or 2°C as projected, the accumulation of thermal stress on Caribbean coral reefs will far exceed the known mass coral bleaching thresholds across the Caribbean. About 65 percent (65%) of all marine species in the Caribbean depend to some extent on coral reefs, so the collapse of these reefs may have widespread impact on fisheries as well as the ecology of the area. Reefs are also attractions for diving and snorkeling. Most importantly, coral reefs afford significant protection to vulnerable coastal resources and infrastructure.

4. Sea Level Rise (SLR): Depending upon tectonic influences, Caribbean countries are projected to experience SLR at rates between 18 to 59 centimetres by 2100. The impacts of SLR will not be uniform in the Caribbean and it is anticipated that Suriname, Guyana, Belize and the Bahamas will be most severely impacted.

5. Precipitation: Decreasing total rainfall accompanied by a change in rainfall patterns such that more heavy rain events are projected. These declines in precipitation will lead to an increase in the risk of periods of drought, which are likely to occur more frequently and be more severe.
IS CLIMATE CHANGE AFFECTING THE TURKS AND CAICOS ISLANDS?

The records from around the world and regionally clearly demonstrate that climate change is already being experienced. Despite a lack of long-term climate data for the Turks and Caicos Islands, it can be inferred that based on the data from the region that by extension the Turks and Caicos Islands will be affected by climate change.

The Caribbean region is among the regions said by scientists to be most at risk from the effects of global warming. It is anticipated that low-lying countries and small island developing states will experience serious impacts as a direct result of global warming. Recent studies have estimated annual economic damage from climate change in Caribbean Community member countries will be around US$11 billion by 2080, or 11 percent of the regions’ gross domestic product. The prospects for the Turks and Caicos Islands are daunting.

SHOULD THE TURKS AND CAICOS ISLANDS BE CONCERNED ABOUT CLIMATE CHANGE?

The answer is emphatically, “YES”. The Turks and Caicos Islands economy relies primarily on tourism and fisheries. These sectors and others are intrinsically linked to the natural environment and subsequent impacts to this environment will ultimately affect these sectors. The Turks and Caicos Islands is reliant on a relatively stable climate and we are vulnerable to minor climate changes. In addition the pattern of development in the TCI is concentrated in the coastal zone where impacts from climate change such as stronger intensity and more frequent hurricanes, storm surges, sea level rise and flooding will be strongly felt.

WHAT CAN THE TURKS AND CAICOS ISLANDS DO?

The Turks and Caicos Islands has to adapt to the potential impacts of climate change in the islands. This will involve examining critical areas of the economy and society and seeking to implement strategies that can address these projected impacts and thereby increase the islands’ resilience to any climate changes that may occur.
CLIMATE CHANGE IMPACTS

The following summarizes key climate change impacts on specific sectors, and identifies possible strategies to manage these risks, all of which need to be included in a National Climate Change Adaptation Strategy and Action Plan for the Turks and Caicos Islands. The following key can be used to identify an action plan as short, medium or long term. Short term✓; Medium Term▲; Long Term★

IMPACTS TO THE FISHERIES SECTOR AND ADAPTATION STRATEGIES

| Environmental Impacts | • Rising sea surface temperatures and sea level rise to result in changes in fish production as well as loss of mangroves, which serve as breeding grounds for some fish and other marine life  
| | • Movement of fish stocks away from normal breeding areas  
| Socio-Economic Impacts | • Fish industry losses and loss of revenue for TCI  
| | • Loss of major source of food/nutrition  

Photo Credit: Amdeep Sanghera

Photo Credit: Amdeep Sanghera
**Adaptation Strategies**

<table>
<thead>
<tr>
<th><strong>Enforce the law:</strong> To improve compliance, a multi-faceted approach is needed: increase enforcement, raise local and national awareness.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Create Effective Marine Protected Areas (MPAs) to enhance resilience:</strong> Create MPAs that are effective and improve the management of existing MPAs. This includes patrolling the area for illegal fishing practices and creating &quot;no-take&quot; MPA zones.</td>
</tr>
<tr>
<td><strong>Create alternative livelihoods:</strong> Invest in creating alternative livelihoods for local fishers and create opportunities in non-extractive industries such as sustainable tourism.</td>
</tr>
</tbody>
</table>

---

**ACTION PLAN FOR FISHERIES SECTOR**

- Educate fishermen and encourage sustainable fishing practices
- Enforcement of current laws to protect fisheries by the TCI government
- Diversify the fisheries sector to include sustainable aquaculture/encourage fish farming
- Develop fisheries that are less temperature sensitive
## IMPACTS ON THE TOURISM SECTOR AND ADAPTATION STRATEGIES

| Environmental Impacts | • Rising sea surface temperatures to result in more frequent and severe coral bleaching events.  
|                       | • Rising temperatures to result in contraction of vegetated areas and the displacement and/or loss of some plant/animal species and habitats.  
|                       | • More intense tropical storms and hurricanes which are likely to result in loss of beaches, damage or loss of reefs and damage to tourism facilities |
| Socio-Economic Impacts | • Impact on tourism “product” resulting in a less marketable travel destination (e.g. degradation of coral reef ecosystems) with associated reduction in visitor arrivals and loss of foreign exchange for TCI  
|                       | • Loss of tourism livelihood opportunities  
|                       | • Adverse indirect impacts on social sectors supporting the tourism industry |
| Adaptation Strategies | • Vulnerability studies: As national and regional vulnerability studies and cost-benefit analyses are completed, incorporate the findings into tourism planning and decision making tools and processes at a regional, destination and enterprise levels.  
|                       | • Best-practice guidelines: Develop nationally consistent best-practice guides for sustainable tourism  
|                       | • Communication: Provide the tourism industry with current information on TCI’s climate change policy highlighting reviews and policy development processes where there is the opportunity for the public to provide input.
ACTION PLAN FOR THE TOURISM SECTOR

- Encourage the tourism industry (including persons in accommodation, transport, attractions) to reduce energy use and conserve water resources.
- Enforce and improve existing laws concerning set-backs for coastal development.
- Build eco friendly designs.

- Adopt greener technologies at tourism facilities
- Revise and upgrade building codes and guidelines

- Adopt greener technologies at tourism facilities
- Obtain Green Globe, Green Key and Green Hotel certification

Photo Credit: Eric Salamanca

Let us Keep Our Beaches, “Beautiful by Nature”

Photo Credit: Lorelei J. Logsdon
## Impacts on Biodiversity and Adaptation Strategies

### Environmental Impacts
- Coral bleaching events and subsequent reef mortality are expected to become more frequent as sea surface temperatures increase.
- Changing rainfall patterns to result in loss of some plant/animal species and habitats
- Slower coral growth relative to sea level rise - Sea level is expected to increase in the range of 18 to 59 centimetres over the next century (IPCC, 2007). The vertical growth rate of coral is likely to be slower than this increase. As a result, corals will be deeper, receive less sunlight and grow more slowly.
- Loss of native vegetation as a result of rising salinity.
- Coral Mortality - Rising sea surface temperatures and sea levels and increasing frequency of storms will increase coral mortality and seriously endanger coral reefs, especially those already under stress from poor water quality, destructive fishing and tourism impacts.
- Reduced run-off impacting catchment ecosystems leading to deteriorating water quality.
- Major changes in flora and fauna composition including the threat of more invasive species
- Reduction in species genetic diversity

### Socio-Economic Impacts
- Poor quality coral reefs will reduce snorkeling and scuba diving experiences.
- The combined effect of deeper reefs and slower growth will cause two problems for coastal areas: 1) corals will not be able to protect the shore as effectively and storm surges will damage the coasts; and 2) smaller reefs will produce smaller amounts of reef sediment which builds and supports island land-bases and beaches.
- Loss of biodiversity could represent a loss of competitive advantage in tourism industry.
- Loss of medicinal species

### Adaptation Strategies
- Create effective marine protected areas (MPAs): Create MPAs in areas that are less prone to bleaching events because of local cold-water currents or upwellings.
- Enhance resilience of coral reefs: Reefs with fewer stresses will be more likely to recover from coral bleaching and adapt to increased temperatures. Government should work with coastal and inland communities to enforce laws against coral reef destruction, control pollutants, promote sources of construction material other than coral, and avoid damage from boats.
<table>
<thead>
<tr>
<th>Controlling coastal development through an Integrated Coastal Zone Management (ICZM) strategy can help protect reefs from long-term stresses.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protect and enhance ecosystems that absorb greenhouse gases. The loss of some ecosystems, especially forest areas and wetlands, contributes a significant amount of carbon dioxide and other greenhouse gases to the atmosphere. Government can mitigate against this by protecting and enhancing these ecosystems.</td>
</tr>
<tr>
<td><strong>Ecosystem-based adaptation</strong>: Ecosystem-based adaptation, integrates the use of biodiversity and ecosystem services into an overall adaptation strategy. This can be cost-effective and generate social, economic and cultural co-benefits and contribute to the conservation of biodiversity. Options to increase the adaptive capacity of species and ecosystems in the face of accelerating climate change include:</td>
</tr>
<tr>
<td>i. Reducing non-climatic stresses, such as pollution, over-exploitation, habitat loss and fragmentation and invasive alien species.</td>
</tr>
<tr>
<td>ii. Wider adoption of conservation and sustainable use practices including, through the strengthening of protected area networks.</td>
</tr>
<tr>
<td>iii. Facilitating adaptive management through strengthening monitoring and evaluation systems.</td>
</tr>
<tr>
<td>Examples of ecosystem-based adaptation activities include:</td>
</tr>
<tr>
<td>a. Coastal defence through the maintenance and/or restoration of mangroves and other coastal wetlands (soft engineering) to reduce coastal flooding and coastal erosion.</td>
</tr>
<tr>
<td>b. Sustainable management of upland wetlands and floodplains for maintenance of water flow and quality.</td>
</tr>
<tr>
<td>c. Conservation and restoration of forests to stabilize land slopes and regulate water flows.</td>
</tr>
<tr>
<td>d. Establishment of diverse agroforestry systems to cope with increased risk from changed climatic conditions.</td>
</tr>
<tr>
<td>e. Conservation of agrobiodiversity to provide specific gene pools for crop and livestock adaptation to climate change.</td>
</tr>
</tbody>
</table>
**ACTION PLAN FOR BIODIVERSITY**

- Enforce the existing laws to enhance resilience of coral ecosystems.
- Develop an early warning system for marine invasive species.
- Enforce the Endangered Species Bill and Wildlife and Biodiversity Protection Bill to come into force to enhance resilience of flora and fauna.
- Develop Terrestrial Habitat Maps for the islands.
- Enhance resilience of marine and terrestrial flora and fauna through the improved management of pollution and waste.
- Establish and maintain buffer zones and migration pathways.

- Educate fishermen about best practices and the need to enhance resilience of coral reefs for ensuring their livelihood.
- Improve management of marine invasive species.
- Transplant coral reefs from resilient ecological zones.
- Develop Marine Habitat maps for the islands.
- Continue to raise awareness about conservation and sustainable development.

- Create alternative livelihoods.
- Develop artificial reefs as nurseries and reef restoration projects.
- Develop ecosystem based adaptation strategies.
- Conduct periodic impact assessments.
Which coral reef would you like to see in the Turks and Caicos Islands?

Let us act now!
## IMPACTS ON THE AGRICULTURE SECTOR AND ADAPTATION STRATEGIES

### Environmental Impacts
- Rising temperatures and changing rainfall patterns may foster increasing fires, and more frequent and severe droughts leading to loss of crops and livestock
- Rising temperatures will also result in increased incidences of pests
- Rising sea levels could lead to loss of land for agriculture due to salinization and inundation.

### Socio-Economic Impacts
- Rising insurance costs.
- Declines in production where there is lack of water supply for irrigation
- Increased costs of pest and disease control.
- Compromised food security

### Adaptation Strategies
- Build adaptive capacity: through training and creating the information and conditions (regulatory, institutional, and managerial) that enable and support adaptation actions such as sustainable agriculture; research on climate change impacts on agriculture to provide a better understanding; awareness-raising among farmers and providing them with genetic resources for crop propagation and breeding programs; establishing databases with relevant data and information to facilitate information sharing, research and analyses.
- Taking adaptive action: Taking actions that will help reduce vulnerability to climate risks or exploit opportunities; creating water collection and storage facilities on farms for use in irrigation; introducing more climate-resilient crop varieties; crop diversification; resource management tools and infrastructure.
ACTION PLAN FOR THE AGRICULTURAL SECTOR AND ADAPTATION STRATEGIES

● Promote the use of locally-grown crops and develop a warning system for invasive species that threaten agricultural production.

+ Promote traditional land management practices that conserve soil fertility and biodiversity and protect ecosystem functions and processes
+ Practice aggressive management of invasive species that threaten agricultural production.

★ Restore degraded areas
★ Invest in new technology such as hydroponics and biotechnology/biosafety
## IMPACTS ON WATER RESOURCES AND ADAPTATION STRATEGIES

<table>
<thead>
<tr>
<th>Environmental Impacts</th>
<th>Higher temperatures will increase loss of water through evaporation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Higher temperatures reduce dissolved oxygen levels, which can have an effect on aquatic life</td>
</tr>
<tr>
<td></td>
<td>Changes in precipitation may affect the availability of fresh water</td>
</tr>
<tr>
<td></td>
<td>Sea level rise may cause salt water intrusion into aquifers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Socio-Economic Impacts</th>
<th>Increased intensity of precipitation will result in flooding events</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overburdening of wastewater and sewer systems, leading to contamination of water supplies with possible outbreak of disease</td>
</tr>
<tr>
<td></td>
<td>Flood water in low-lying areas creates breeding grounds for mosquitoes with increased risk of malaria, yellow fever and dengue</td>
</tr>
<tr>
<td></td>
<td>Increased dependency on desalinated water supply which will ultimately result in increased cost per gallon for water</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adaptation Strategies</th>
<th>Educate the public on water conservation measures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rainwater harvesting (i.e. from rooftops) and tanks: to store rain water as an alternative source of drinking water so that communities aren't solely reliant on groundwater.</td>
</tr>
<tr>
<td></td>
<td>Increase resilience to heavy rain events by improving infrastructure design</td>
</tr>
<tr>
<td></td>
<td>Local watershed management. Support institutions that have the authority to manage the local catchment in the interest of all stakeholders, including domestic water users; ensure there is proper accountability in these institutions.</td>
</tr>
</tbody>
</table>
ACTION PLAN FOR WATER RESOURCES AND ADAPTATION STRATEGIES

- Build local understanding on the links between predicted climate change and the impacts that this will have on water resources at a local level.
- Educate the public on water conservation measures
- Educate the public about improving water capture in households
- Repair and expand public infrastructure for water capture and storage

- Establish a leak detection programme
- Conduct a hydrological study in the Turks and Caicos Islands to assess water availability and location
- Enhance the local weather monitoring and modeling to provide early flood warning systems

- Explore the option of using groundwater resources for specific purposes e.g.; agriculture in North Caicos
- Plan for expansion of desalination production based on the projected water demand

Visit www.environment.tc to download a copy of the Turks and Caicos Islands Green Paper
## IMPACTS ON HUMAN HEALTH AND ADAPTATION STRATEGIES

<table>
<thead>
<tr>
<th>Environmental Impacts</th>
<th>Socio-Economic Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Rising temperatures will give rise to heat stress.</td>
<td>▪ Possible inability for the poor to access clean water if it becomes scarce.</td>
</tr>
<tr>
<td>▪ Changing weather and precipitation patterns will likely increase the incidents of water and vector-borne diseases.</td>
<td>▪ Increasing deaths from disease, heat stress (causing heart attack stroke) and extreme weather events.</td>
</tr>
<tr>
<td>▪ Rising sea levels may result in loss of agricultural land and coastal fresh water resources.</td>
<td>▪ Rising costs of health care.</td>
</tr>
<tr>
<td>▪ Extreme weather events are likely to threaten human populations, especially in coastal settlements.</td>
<td>▪ Reduction in visitor arrivals due to certain disease outbreaks.</td>
</tr>
<tr>
<td>▪ Less potable water available</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adaptation Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Strengthening health systems to cope with the increased health threats posed by climate change, including emergencies related to extreme weather events and storm surge</td>
</tr>
<tr>
<td>▪ Advocacy and awareness about diseases within the Health sector and the general public.</td>
</tr>
<tr>
<td>▪ Partnership with other agencies and other sectors at local, national, regional and international levels to ensure that health protection and health promotion are central to climate change adaptation and mitigation policies.</td>
</tr>
<tr>
<td>▪ Promote preventative health care and the collection and analysis of scientific data relating to incidence of disease</td>
</tr>
</tbody>
</table>
ACTION PLAN FOR HUMAN HEALTH

✔ Educate the public about best practices to deal with vector and water borne diseases emphasizing that prevention is better than cure.
✔ Remove potential breeding sites for mosquitoes from around the office and at home.

📍 Improve preventative health care facilities and services as well as build the human resource capacity at these facilities.

🔹 Develop emergency response procedures that can handle pandemics and epidemics, and increases in vector and water-borne diseases.
**IMPACTS ON SETTLEMENTS AND INFRASTRUCTURE AND ADAPTATION STRATEGIES**

| Environmental Impacts | • Increasing fires as a result of extremely hot days  
| | • Increased probability of flooding.  
| | • Increased intensity of tropical storms and hurricanes likely to result in increased incidents of damage to coastal infrastructure and homes.  
| | • Extreme events (more frequent and severe rainfall events, high winds, storm surges, flooding) expected to threaten infrastructure.  
| | • Rising sea levels to encroach on some coastal properties and thoroughfares. |
| Socio-Economic Impacts | • Rising insurance costs.  
| | • Potentially substantial reconstruction, retrofitting and flood prevention costs  
| | • Increase in costs associated with recovery from flooding.  
| | • Tropical storms and hurricanes likely to destroy coastal settlements.  
| | • Rising land water, and sewerage/sanitation costs.  
| | • Changes to zoning, building regulations, impacts on property values. |
| Adaptation Strategies | • Modify the national Building Code and Development Manual where possible to address the issues of climate change as well as encourage developers to take climate change into consideration.  
| | • Engage local communities to extract anecdotal and traditional knowledge, to involve local stakeholders in policy planning and implementation, and to create local support for coastal management and rural development policies.  
| | • Mandate Environmental Impact Assessments (EIAs) that include climate change considerations for all development projects in vulnerable areas.  
| | • Support Integrated Coastal Zone Management (ICZM).  
| | • Develop an Energy Policy for the Turks and Caicos Islands |

**ACTION PLAN FOR SETTLEMENTS AND INFRASTRUCTURE**
Make requisite changes to the building code to address development in vulnerable areas.

Develop legislation and regulations that provide deterrents and penalties for pollution and degradation to the environment.

Beach nourishment in combination with reef protection and restoration.


Develop land-use plans that promote development away from the coast. Employ land-use planning to regulate land-use practices in order to incorporate climate change impacts into decision-making processes.

Institute a mechanism for the development and implementation of shoreline management plans and coastal zone management plans.

Mainstream climate change into conservation management and national planning processes.

- Environmental Management Bill to come into force
- Make the completion of EIA's a mandatory condition for the approval of all commercial development activities,
- Prohibit illegal sand mining and preserve sand sources for beach replenishment
- Utilize recommendations in the Energy Policy

Photo Credit: Jewel Batchasingh
CONCLUSION

Following the pattern observed globally, climate and weather patterns in the Caribbean have already begun changing. Temperatures and the frequency of extreme weather events, such as hurricanes and droughts, have already increased in the wider Caribbean and there is particular concern over predicted sea level rise.

Given that the Caribbean States contribute insignificant amounts of greenhouse gases to the global total, their main priority in addressing climate change is to formulate and implement appropriate strategies for adaptation to minimize the social and environmental impacts of climate change. However, mitigation measures – reducing energy use and greenhouse gas emissions - can complement adaptation measures and provide useful short term benefits to countries such as energy cost savings and recognition as a low-carbon destination. For example, actions to reduce greenhouse gas emissions, such as an increased use of renewable or alternative energy and the development of an energy policy will benefit the Turks and Caicos Islands through reduced air pollution, lower negative effects of fossil fuel pollution on the environment, and job creation as the Turks and Caicos Islands shifts away from its dependence on fossil fuels.

It is clear that the Turks and Caicos Islands are at risk to the adverse effects of climate change. Mitigation and adaptation are essential as strategies to deal with these effects and will be essential as the country progresses towards achieving sustainable development aspirations.

The Turks and Caicos Islands, like the rest of the Caribbean, will be affected by the impacts from climate change. However, on-the-ground climate change adaptation responses and requisite capacities are still generally lacking in the Caribbean. While climate change poses significant challenges to Turks and Caicos Islands and we are constrained in our limited capacity to respond, adaptation to climate change presents some important opportunities. Firstly, it provides a new forum through which to educate the public and change attitudes and behaviors regarding the environment and sustainable development. It also provides the much-needed impetus to implement “no regrets” measures to reduce our inherent vulnerabilities to natural disasters and external shocks and to improve environmental management and the physical planning process. In a similar vein, climate change will force us to diversify our agricultural, tourism and energy portfolios, ultimately increasing our security and long-term viability.

For these reasons it is imperative that a National Climate Change Adaptation Strategy and Action Plan for the Turks and Caicos Islands be developed, adopted and implemented as a pressing national priority.