Workshop on MPA resilience to Climate Change: How MPA networks can improve marine ecosystem resilience in the Caribbean Region

St. Martin, FWI, 28-29 November 2013

MPA RESILIENCE TO CLIMATE CHANGE: PLAN OF ACTION FOR TCI

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The Turks and Caicos Islands are an archipelago located in the Atlantic Ocean that lie between 21° 45’ N and 71° 31’ W, approximately 920 kilometres southeast of Miami, Florida.

Approximately 430 km². The islands can be divided into two distinct groups: The Caicos Islands and the Turks Islands which are separated by a deep water channel called the Columbus Passage which is approximately 35 kilometres wide.

9 inhabited islands and 40 uninhabited cays. Providenciales, North Caicos, South Caicos, Middle Caicos, Pine Cay, Parrot Cay, Big Ambergris Cay, Grand Turk and Salt Cay are inhabited.

32,427 inhabitants (2012)

Turks and Caicos Islands are relatively flat. Providenciales island rises to a high point of 50 m above sea level while Flamingo Hill on the north western point of East Caicos has an altitude of about 49.68 m. Sinkholes, caves and ridge formations are common. The islands consist largely of Pleistocene oolitic limestones and unconsolidated Holocene sands.

Tourism is the main economic activity. The offshore financial sector is also significant. Fishing for export to the US (mainly lobster and conch) is the third most important economic sector.
Criteria for designation as MPA

1. Enjoyment by residents and visitors to the country
2. Sustainably underpin economic activities
3. Protection of species and habitats for future generations
4. Protection sensitive species and habitats to human intrusion
5. The historic site of cultural significance may be both conserved for posterity as well as opened up to public view
Marine Protected Areas (MPAs) in TCI

1. Princess Alexandra Land and Sea National Park
2. Admiral Cockburn Land and Sea National Park
3. West Caicos Marine National Parks
4. Northwest Point Marine National Park
5. Fort George Land and Sea National Park
6. Columbus Land Fall Marine National Park
7. Grand Turk Cays Land and Sea national Park
8. Chalk Sound National Park
9. South Creek National Park

Source: National Parks Ordinance
Climate Change Policy of the Turks and Caicos Islands (Draft)

Climate Change in Your Hands
04/06/2011
Climate Change Committee

Climate Change Vulnerability and Capacity Assessment (VCA) For the Tourism Sector, Grace Bay, Providenciales Turks and Caicos Islands
Climate Change Committee
September 2011

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SUBJECT: CLIMATE CHANGE POLICY

BACKGROUND

1. The Intergovernmental Panel on Climate Change (IPCC) has confirmed that small island states and lowlying coastal developing states like the Turks and Caicos Islands are the most vulnerable to global climate change, and accompanying sea level rise.

2. The issue of Climate Change was accorded the highest priority by Small Island Developing States in the 1994 Barbados Programme of Action (BPOA). Emerging from the BPOA was the establishment of a regional institution called the Caribbean Community Climate change Centre (CCCCC). The CCCCC was established in 2004 in Belize with a mandate to coordinate regional efforts to address Climate Change impacts. In response, twelve CARICOM countries have been cooperating since 1997 under the umbrella of a series of regional projects aimed at building their capacity to cope with the threats of climate change. One such project is the Melting of Adelie Bird in Climate Change (MASC) project that aims at integrating climate change adaptation strategies in national development plans.
# Potential Impacts of Climate Change in the TCI

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<th>Potential Climate Change Impact</th>
<th>Effects</th>
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| Temperature Increase                     |  Loss of terrestrial and marine species  
                                        |  Reduced fish stocks  
                                        |  Human health impacts including heat stress and increased vector borne disease                                                                 |
| Increased Extreme Events                |  Damage to physical infrastructure and natural assets such as coral reefs and vegetation                                                         |
| Increased Sea Surface Temperature       |  Coral bleaching  
                                        |  Ocean acidification  
                                        |  Movement of marine species away from traditional habitats                                                                 |
| Sea Level Rise                          |  Erosion of coastal areas including beaches, wetlands and coastal settlements  
                                        |  Saline intrusion                                                                                                                             |
| Changes in Precipitation                |  Depletion of limited water supplies  
                                        |  Changes in water quality  
                                        |  Human health impacts from increased vector borne diseases                                                                 |

Source: TCI Climate Change Policy
Steps to enhance resilience of natural assets:

* Regulate coastal development and improve management of pollution & waste
* Enforce existing laws protecting native flora and fauna
* Develop an early warning system for marine invasive species
* Endangered Species Bill and Wildlife and Biodiversity Protection Bill to come into force protecting native flora and fauna

Source: TCI Climate Change Policy
Establish and maintain buffer zones and migration pathways

Educate fishermen about best practices that protect coral reefs and sustain their livelihoods

Improve management of marine invasive species

Transplant coral reefs from resilient ecological zones

Develop marine habitat maps

Source: TCI Climate Change Policy
Action Plan (cont’d)

* 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

Source: TCI Climate Change Policy
Challenges and Issues

- Lack stakeholder involvement - encourage public-private partnership
- Lack capacity
- Inadequate funding
- Lukewarm political will
- Environmental bills not considered top priority in the legislature
- Impacts of climate change
Thank you!

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