



Potential Climate Compatible Tourism Adaptation Strategies for Belize



What is Climate Adaptation?

- Adaptation:
- “..... an adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.”
- Adaptation is a detailed and long-term process that requires updated information, policy changes and financial investments
- Need to begin process immediately so that Belize can be in a position to address impacts from climate change, particularly to its tourism industry
- The process of adaptation must involve the government, private sector, academia and local communities



Impact	Implications for Tourism
Warmer temperatures	Altered seasonality, heat stress for tourists, cooling costs, changes in plant-wildlife-insect populations and distribution, infectious disease ranges
Increasing frequency and intensity of extreme storms	Risk for tourism facilities, increased insurance costs/loss of insurability, business interruption costs
Reduced precipitation and increased evaporation in some regions	Water shortages, competition over water between tourism and other sectors, desertification, increased wildfires threatening infrastructure and affecting demand
Increased frequency of heavy precipitation in some regions	Flooding damage to historic architectural and cultural assets, damage to tourism infrastructure, altered seasonality
Sea level rise	Coastal erosion, loss of beach area, higher costs to protect and maintain waterfronts
Sea surface temperatures rise	Increased coral bleaching and marine resource and aesthetics degradation in dive and snorkel destinations
Changes in terrestrial and marine biodiversity	Loss of natural attractions and species from destinations, higher risk of diseases in tropical-subtropical countries



General adaptations strategies - National level

- Strategic planning for inland tourism development zones as alternatives to coastal tourism land use
- Upgrading procedures for EIA to incorporate hazard risk and climate change vulnerability assessment
- Training of National Agencies in monitoring climate change effects on coastal resources, natural systems beneficial to tourism and natural attractions



General adaptations strategies - National level

- Improving socio-economic data collection to measure climate change impacts, e.g. scuba diving and visits to attractions
- Designing & implementing minimum standards for floor level heights and other flood resistant measures for buildings in coastal & flood plain areas
- Providing technical assistance in design standards for marina piers and bulkheads
- Build technical and administrative capacity for managing coastal areas

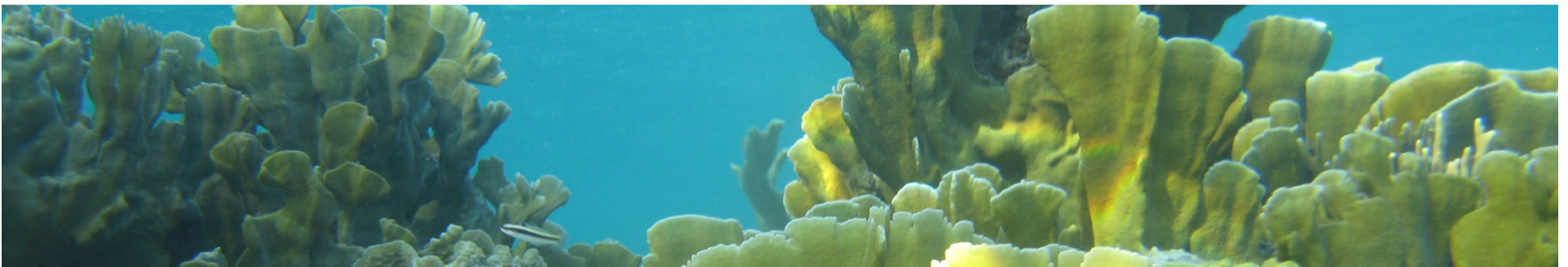


Potential tourism adaptation measures for SIDS

Adaptation measures	Relevance to tourism	Barriers to implementation	Measures to remove barriers
'Soft' coastal protection	Many valuable tourism assets at growing risk from coastal erosion	Lack of credible options that have been demonstrated and accepted	Demonstration of protection for tourism assets and communities
Enhanced design, siting standards and planning guidelines	Many valuable tourism assets at growing risk from climate extremes	Lack of information needed to strengthen design and siting standards	Provide and ensure utilization of targeted information
Improved insurance cover	Growing likelihood that tourists and operators will make insurance claims	Lack of access to affordable insurance and lack of finance	Ensure insurance sector is aware of actual risk levels and adjusts premiums
Shade provision and crop diversification	Additional shade increases tourist comfort	Lack of awareness of growing heat stress for people and crops	Identify, evaluate and implement measures to reduce heat stress
Reduce tourism pressures on coral	Reefs are a major tourist attraction	Reducing pressures without degrading tourist experience	Improve off-island tourism waste management
Desalination, rainwater storage	Tourist resorts are major consumers of fresh water	Lack of information on future security of freshwater supplies	Provide and ensure utilization of targeted information
Tourism activity/Product diversification	Need to reduce dependency of tourism on 'sun, sea and sand'	Lack of credible alternatives that have been demonstrated and accepted	Identify and evaluate alternative activities and demonstrate their feasibility
Education/awareness raising	Need to motivate tourism staff and also tourists	Lack of education and resources that support behavioral change	Undertake education/awareness programs

Adaptation Options for Belize's Tourism Sector

- Overall adaptation strategies for the tourism industry include:
 1. Low season closures and product and market diversification from marine to inland destinations
 2. Education and awareness programs targeting the tourism industry and the public
 3. Training programs on climate change adaptation for tourism operators and tourism industry association



Adaptations - Warmer temperatures

- Shade provision for resorts
- Product diversification – reduced dependency on sun, sea, sand
- Widely available weather forecasting and early warnings
- Enhanced design, siting standards and planning guidelines



Adaptations - Increasing frequency and intensity of extreme storms

- Hurricane proof building design and structure
- Hurricane interruption Guarantees
- Building design standards (for CAT 3 hurricane force winds), siting standards and planning guidelines
- Disaster preparedness planning
- Evacuation plans
- Access to early warning equipment (e.g. radios) for tourism operators
- Widely available weather forecasting and early warnings
- Coastal management plans and set back requirements
- Adjustable insurance premiums
- Extreme event risk exposure coverage



Adaptations - Reduced precipitation

- Rainwater collection and water recycling systems
- Desalination on small cayes
- Water conservation plans
- Water conservation education for employees and guests
- Lending incentives for water conservation projects



Adaptations – increased frequency of heavy precipitation

- Enable access to early warning equipment (e.g. radios) to tourism operators
- Widely available weather forecasting and early warnings
- Coastal management plans and set back requirements
- Building design standards (flood prone areas, building code, setbacks, etc)
- Drainage and watershed management to reduce flooding and erosion risks
- Adjustable insurance premiums
- Extreme event risk exposure coverage
- Improved insurance coverage





Adaptations – sea level rise

- Building design standards (flood prone areas, building code, setbacks, etc)
- Product diversification – reduced dependency on sun, sea, sand
- Redirect client away from impacted destinations
- Guidelines ‘soft’ coastal protection - restoration of mangroves, beach nourishment, reef protection
- Coastal management plans and set back requirements
- Beach erosion and water quality monitoring programs
- Consideration of climate change in credit risk and project finance assessments
- Adjust insurance premiums

Adaptations – sea surface temperature rise

- Best practices for in-water activities
- Reduce tourism pressures on coral reefs
- Public education campaign
- Product diversification – reduced dependency on sun, sea, sand
- Coral Bleaching Response Plan
- Bleaching and beach water quality monitoring programs
- Environmental audits and retrofit programs for hotels/marinas with climate change component

