

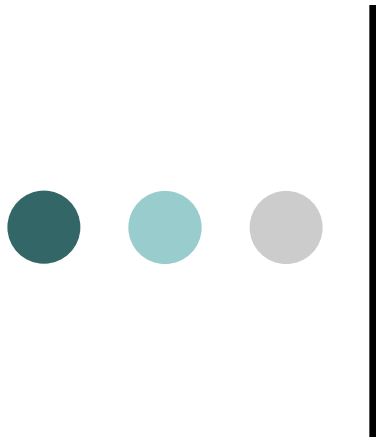
# Climate Change and Sustaining Caribbean Tourism

Presented by:

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CTO member countries have only 1 percent of the world's population but attract 3 percent of global tourism arrivals and expenditure.



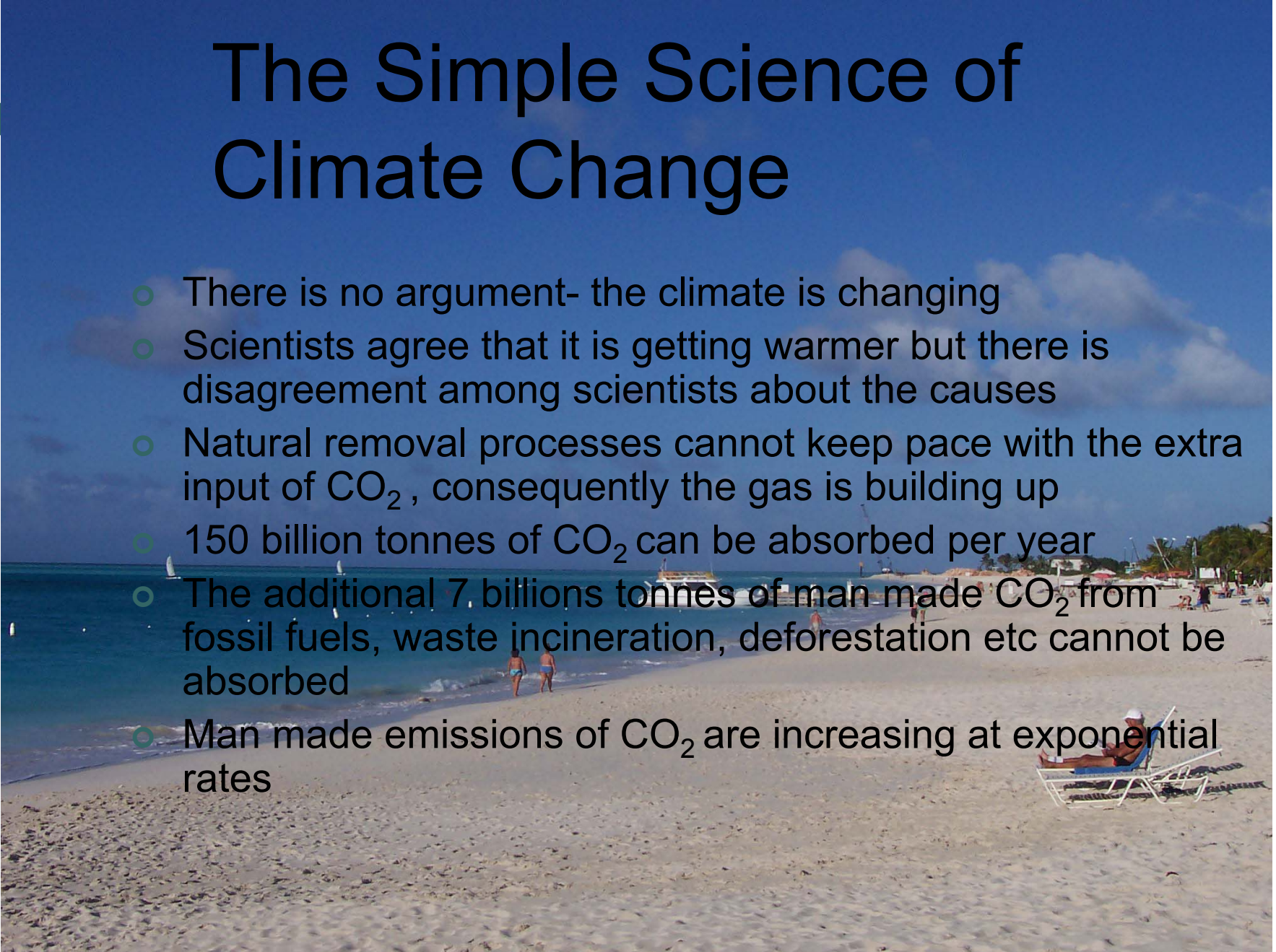
## Caribbean Tourism at a Glance 2007 Estimates

Major Market	2002	2003	2004	2005	2006	2007
USA	10,131.4	10,687.5	11,409.0	11,352.8	11,490.5	11,600.0
Canada	1,272.8	1,500.2	1,735.8	1,788.7	1,809.8	2,036.0
Europe	4,492.6	5,009.0	5,283.5	5,498.5	5,401.5	5,537.0
Other	3,101.0	3,202.0	3,346.0	3,572.3	3,516.0	3,375.0
<b>Total Tourism Arrivals (000s)</b>	<b>18,997.8</b>	<b>20,398.7</b>	<b>21,774.3</b>	<b>22,212.3</b>	<b>22,217.8</b>	<b>22,548.0</b>
<b>Total Cruise Passenger Visits (000s)</b>	<b>15,945.2</b>	<b>18,002.8</b>	<b>19,857.5</b>	<b>18,996.0</b>	<b>19,153.1</b>	<b>19,536.0</b>
<b>Total Expenditure (US \$ Billion)</b>	<b>18.9</b>	<b>20.4</b>	<b>22.5</b>	<b>24.1</b>	<b>25.3</b>	<b>27.0</b>

Source : Caribbean Tourism Organisation

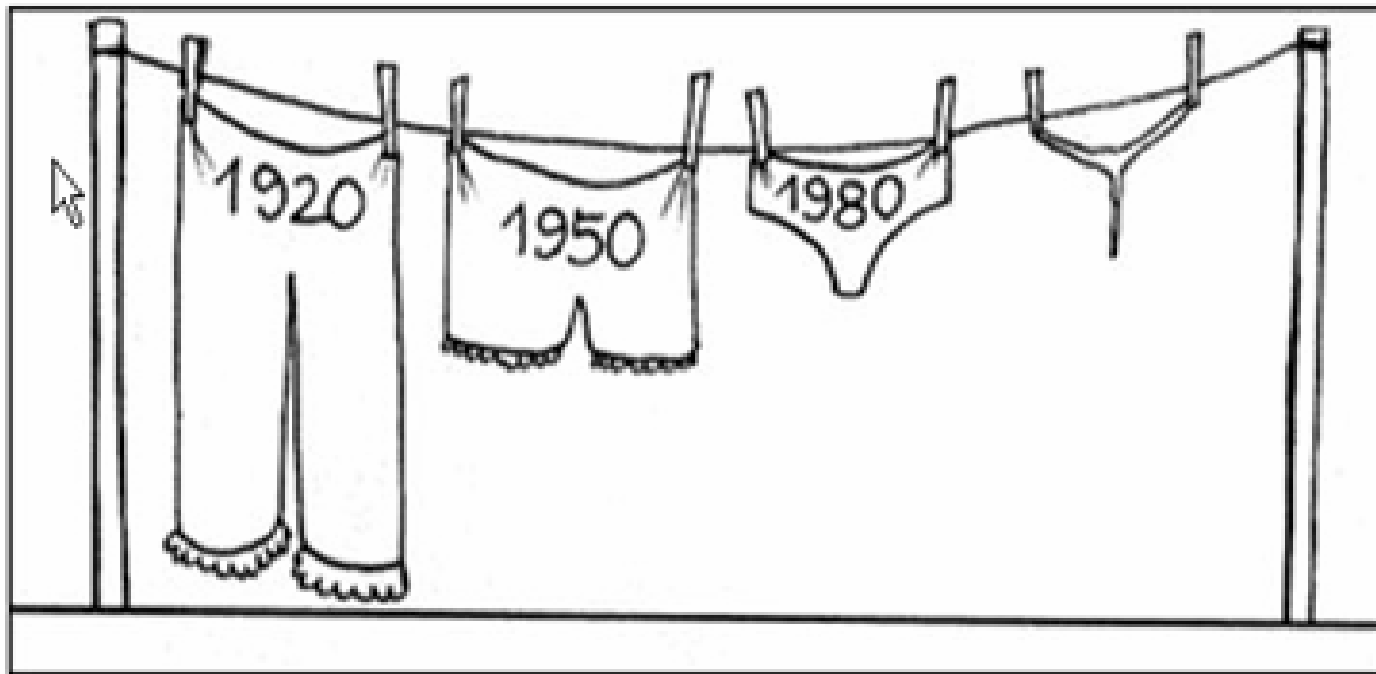
# The Simple Science of Climate Change

- There is no argument- the climate is changing
- Scientists agree that it is getting warmer but there is disagreement among scientists about the causes
- Natural removal processes cannot keep pace with the extra input of  $\text{CO}_2$ , consequently the gas is building up
- 150 billion tonnes of  $\text{CO}_2$  can be absorbed per year
- The additional 7 billions tonnes of man made  $\text{CO}_2$  from fossil fuels, waste incineration, deforestation etc cannot be absorbed
- Man made emissions of  $\text{CO}_2$  are increasing at exponential rates

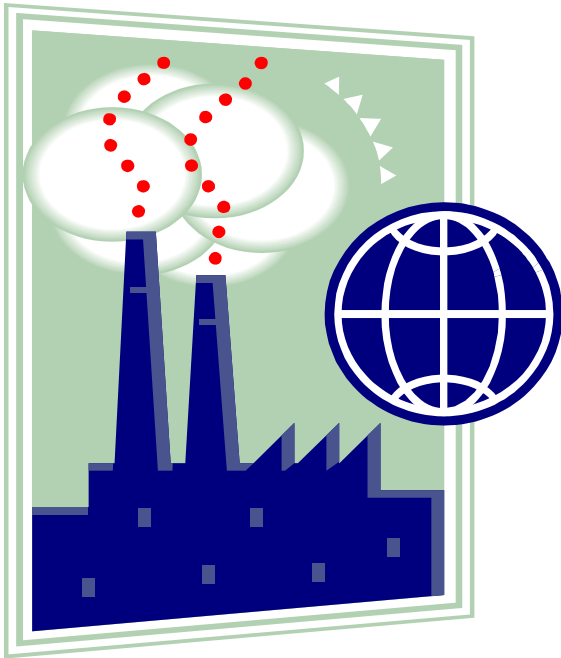


# The Simple Science?

For those who need proof that the planet is warming up



# Global Report on Climate Change



- The Intergovernmental Panel (IPCC) on Climate Change in its 4<sup>th</sup> Assessment report released in November 2007 has projected that the pace of CC is very likely to accelerate with continued GHG emissions at or above current rates, with best estimates that global avg. surface temperatures will rise by 1.8 to 4 degrees Celsius by the end of the 21<sup>st</sup> century.



# Climate Change and Tourism

- Increases in temperatures will manifest itself with extremes in temperatures, increases in tropical cyclones (typhoons and hurricanes), droughts and floods making tourism destinations more vulnerable to natural disasters
- The IPCC concluded that CC would impede the ability of many nations to achieve sustainable development by mid- century.



# Climate Change and Tourism (cont'd)

“ The tourism sector cannot address the challenge of climate change in isolation but must do so within the context of the broader international sustainable development agenda. The critical challenge before the global tourism sector is to develop a coherent policy strategy that decouples the projected massive growth in tourism in the decade ahead from increased energy use and GHG emissions, so as to allow tourism growth to simultaneously contribute to poverty alleviation and play a major role in achieving the United Nations Millennium Development Goals.”

Source: UNWTO, Climate Change and Tourism: Responding to Global Challenges



# Categories of Global Tourism Climate Change Impact

1. **Direct Climate Impacts** e.g. length and quality of tourist season, weather extremes, food and water supply and the overall impact of these on tourism demand
2. **Indirect Environment Change Impacts** e.g. water availability, bio-diversity loss, altered agricultural production, increased hazards, coastal erosion and inundation, increase in vector-borne diseases
3. **Impacts of Mitigation Policies on Tourist Mobility:** Mitigation policies to Reduce GHG emission and the impact on tourist flows and cost of transport
4. **Indirect Societal Change Impacts:** potential economic impact to mitigate CC measures resulting in curtailed economic growth and less discretionary income to grow tourism



# What Lies Ahead

- Reducing energy use
- Emissions trading scheme
- Improving energy efficiency through new technologies
- Renewable energy- wind, photovoltaic, biomass, solar thermal, geothermal and energy regeneration from waste



# The Caribbean Reality

- The region accounts for less than 1 % of Green House Gas Emissions (GHG).
- Region amongst the most vulnerable to impacts of climate
- Tourism development in the region largely coastal e.g. 90% of tourism plant in Barbados is along the coast
- The concern is less on mitigation and more on adaptation
- Adaptation necessary not only for climate change but climate variability
- Sectors/areas most impacted include tourism, water, agriculture, human settlements and health



# The Caribbean's Response

- Establishment of the Caribbean Community Climate Change Centre in 2004
- Mission: The CCCCC supports the people of the Caribbean as they address the impact of climate variability and change on all aspects of economic development through the provisions of timely forecasts of potentially hazardous impacts of both natural and induced climatic changes on the environment, and the development of special programmes which create opportunities for sustainable development.

# Regional Case Study



2005 and 1998 were the most damaging years for coral reefs in recorded history. They were also the world's hottest years since records began in 1880. They were massive coral losses due to coral bleaching in the Caribbean.

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# Coral Bleaching





## Regional Case (Cont'd)

- Coral mortality on Barbados was the most severe ever seen with 17 % to 20% coral losses
- French W.I. coral losses ranged from 11% to 30%
- 73% of all *Colpophyllia* and *Diploria* coral colonies died In T & T

Source: ICRI, GCRMN- Status of Caribbean Coral Reefs After Bleaching and Hurricanes in 2005

# Future of Caribbean Coral Reefs



- Predictions from IPCC 2007 report indicate that the extreme warming of 2005 will not be an isolated occurrence.
- In addition to warmer temperatures, increasing acidity of the sea water with more CO<sub>2</sub> will slow the growth of hard coral trying to recover from bleaching and other disturbances
- The increase in frequency of more damaging hurricanes will cause damage to the reefs and the communities that rely on them
- Without significant reductions in GHG emissions in the next 20 -50 yrs the ability of coral reefs to provide food, protection and enjoyment for future generations will be significantly comprised



# Economic Impact of Hurricanes on Select Tourism Destinations in 2004

Country	Natural Event	Economic Impact (US\$ Million)
The Bahamas	Hurricanes Frances and Jeanne	551
The Cayman Is.	Hurricane Ivan	1620
The Dom. Republic	Tropical Storm Jeanne	296
Grenada	Hurricane Ivan	889
Jamaica	Hurricane Ivan	595

Source : UNECLAC

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# Hurricane Ivan in Grenada

- Grenada loss 212 percent of GDP!!!
- Damage to Grenada was estimated at EC\$ 2.2 billion
- 90% hotel stock were damaged or destroyed
- 90% of the housing stock damaged

# Regional Tourism Position

“...the CHA and CTO believe that measures should be proportionate to industries’ and countries overall contribution to climatic changes and support a holistic approach where household, road transport, agriculture and other industries’ practices are incorporated into efforts to minimize carbon dioxide emissions. We note that improvements in fuel efficiency, alternative energy sources and technology each have their part to play in limiting emissions growth.”

Source: CHA-CTO Position Paper on Global Climate Change and the Caribbean Tourism Industry

# Climate Change and Regional Tourism Organisations' Position

“ The Caribbean tourism industry firmly believes that it is overall a low carbon emitting industry that contributes actively to combating the negative effects of climate change and therefore it should not be penalised as the world’s major economic powers move towards curtailing their past, present and future impacts on the global climate.”

Source: CHA-CTO Position Paper on Global Climate Change and the Caribbean Tourism Industry

# Caribbean Tourism Position (Cont'd)

“The CHA and the CTO recognize the importance of air transport services for the growth and development of not only the tourism industry in the Caribbean, but for the growth of other sectors in the global trading arena. We support initiatives in all transport segments, not only aviation, that are incorporated into a global policy framework that achieves reductions in carbon dioxide emissions that would reduce negative impacts on the climate system”.

Source: CHA-CTO Position Paper on Global Climate Change and the Caribbean Tourism Industry



# Factors of Caribbean Tourism Supply as it Relates to CC

- Shifts in travel patterns- more spending in temperate nations and less spending in warmer nations
- Shifts in tourism from North Europe to Mediterranean and the Caribbean, North America to the Caribbean
- Possible increase in length of stay thereby increasing revenues and while reducing the average carbon/ecological footprint per trip
- Research needs to be done on tourists' propensity to pay to offset their emissions or to reduce the impact of tourist related travel
- Opportunity exist for the Caribbean to develop low-carbon products
- Perception of CC impact are influenced by the nature of media coverage- speculation and misinformation about the impact on CC already exist in the media



# What is CTO doing?

- Report On The International Policy And Market Response To Global Warming And The Challenges And Opportunities For The Caribbean Tourism Sector
- CARIBSAVE
- Adaptive/mainstreaming strategies for the sector against natural hazards i.e. work with CDERA in the area of disaster risk management
- Strengthening ties with Green Globe to promote Caribbean's position as a green and carbon neutral destination



# Some Key Recommendations from CTO Climate Change and Tourism Report

- Inter-ministerial cooperation and cross-ministerial collaboration is required to assist in the fulfilment of the recommendations
- Caribbean countries should review the energy use of their source markets in comparison with their cost-effectiveness to restructure their tourism economies with the overall goal of reducing energy use and thus the vulnerability to oil price volatility, climate policy, environmental awareness of tourists, and the consequences of unlimited climate change



# Other Key Recommendations

- The Caribbean should seek to become the world's first 'carbon neutral' tourism region, which would generate huge media attention and create a positive, environmental image for the region.
- In order to guarantee a high level of transparency and credibility, the region should seek to cooperate with a high-quality voluntary carbon offset provider offering GS CERs, i.e. all projects should be registered through UNFCCC and provide sustainable development benefits



# Recommendations (Cont'd)

- There is a need to build the capacity for adaptation and mitigation in response to climate change across government bodies and tourism institutions and organisations at national, regional and destination level.
- In order to assess the need for and best practices to adaptation and mitigation, both global and location-specific research and evaluation activities are required, e.g. projecting current and future climate change impacts; assessing vulnerabilities and evaluating resilience and adaptive capacity; and evaluating current and future adaptation and mitigation activities.
- The needs of destinations, nations and the region should be addressed as a whole by using a sectoral approach i.e. addressing tourism through its integral sectors; energy, water, waste, agriculture, biodiversity and coastal planning..
- Carbon emissions should be measured with transparency through the tourism supply chain and the use of low carbon technologies and renewable energy should be encouraged by the use of incentives and regulation. Efficiencies should be sought through economies of scale and business investment in low carbon infrastructure should also be encouraged



# What is CARIBSAVE?

**Caribbean Climate Change, Tourism And Livelihoods: A Sectoral Approach To Vulnerability And Resilience:(Impacts, Adaptation, Mitigation And Capacity Building)**

Implemented by: CARICOM Climate Change Centre and the University of Oxford Centre for the Environment with support from CTO and UNWTO



# Key Objectives of CARIBSAVE

**There are seven (7) principal objectives of this project:**

1. To successfully model and predict the changes in climate as they will affect the Caribbean on a regional, national and destinational scale.
2. To assess the vulnerability, resilience and adaptive capacity of the Caribbean region, nations and selected destinations.
3. To thoroughly assess and evaluate the impacts of climate change on tourism and livelihoods of the Caribbean region, nations and selected destinations on a sectoral basis including e.g.:
  - Water Quality and Availability;
  - Energy Supply and Distribution (Regional, National, Destinational)
  - Agriculture, Fisheries and Food Security;
  - Human Health;
  - Marine and Terrestrial Biodiversity, and Landscape Aesthetics;
  - Infrastructure and Settlements (inc. integrated coastal zone management)



# Objectives (Cont'd)

4. To address national and regional policy by conducting a socio-economic analysis of the costs and risks of climate change in the Caribbean and the costs and risks of reducing emissions
5. To provide effective and practical adaptation and mitigation strategies for the development of regional, local and national policy development and implementation.
6. To support the transition of the Caribbean region to become the world's first 'Carbon Neutral' tourism region, using three nations as pilot countries in this regard
7. To design and implement a series of sectoral based capacity building seminars throughout the Caribbean region.



# CTO & CDERA

- CTO lead for the tourism sector for mainstreaming of DRM under CDERA's Comprehensive Disaster Management (CDM) programme for the region.
- IADB funded project joint initiative CDERA-CTO-UWI-CROSQ for
  1. Standards Development for Hazard Mapping, Vulnerability Assessment & Economic Valuation
  2. DRM Strategy and Plan of Action for the Tourism



# Green Globe Carbon Neutrality Plan

- Green Globe's experience and expertise in benchmarking and certifying sustainable tourism destinations and enterprises, its international network of scientists and research innovation and participation in tourism's governing associations and organizations, provides all the resources necessary to build new travel consumer demand based on truly sustainable and carbon neutral destinations.



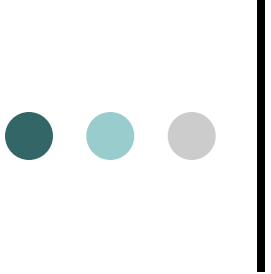
# ***Three Stage Sustainability and Carbon Neutrality Plan***

- **Stage 1. Strategies for sustainable and carbon neutral tourism**
- **Stage 2. Measurement and Management**
- **Stage 3. Change and Communication**



# Conclusion

Tourism policy makers must ensure that adaptive strategies to deal with climate change become part of planning for tourism in the future.



We are made wise not by the  
recollection of our past, but by  
the responsibility for our future.

George Bernard Shaw (1856-  
1950) *Irish writer.*



Thank you