



Caribbean Regional Sustainable Tourism Development Programme
CTO Lot 3: Sustainable Tourism Policy Development

International Policy and Market Response to Global Warming: Challenges and Opportunities for Caribbean Tourism

CTO /CRSTDP Regional Workshop #9

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Caribbean Regional Sustainable Tourism Development Programme
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STAKEHOLDERS & CARBON NEUTRALITY

REPORT FINDINGS #2

Dr. Murray C. Simpson





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STRUCTURE OF PRESENTATION

1. Stakeholder Consultation Methodology and Objective
 2. Stakeholders, Questions and Topics
 3. Challenges and Opportunities
 4. Information and Assistance Requirements
 5. Renewable Energy Options
 6. Initiatives to Reduce Carbon Footprint of Tourism
 7. Carbon Neutrality and Mitigation
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STAKEHOLDER CONSULTATION METHODOLOGY & OBJECTIVE





Objective

- Gather information on the challenges and opportunities that climate change presents for the Caribbean tourism sector in the context of the project





Methodology

- Process of consultation and secondary data collation
 - Over thirty stakeholders more than 15 regional organizations, seven countries
 - Semi-structured interviews using a pre-defined qualitative questionnaire
 - Coupled with unstructured interviews
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STAKEHOLDERS, QUESTIONS & TOPICS





Stakeholders included...

- Caribbean Tourism Organization (CTO)
 - CARIFORUM Tourism Programme Unit
 - Caribbean Community Climate Change Centre (CCCCC)
 - Caribbean Hotel Association (CHA)
 - Inter-American Development Bank (IADB)
 - Caribbean Community Secretariat (CARICOM)
 - Organization of Eastern Caribbean States (OECS)
 - Caribbean Environmental Health Institute (CEHI)
 - Association of Caribbean States
 - Caribbean Association of Electric Utilities (CARILEC)
 - Energy Dynamics
 - University of West Indies (UWI)
 - Ministries of Tourism, Economic Affairs and Environment
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Questions and Topics #1

- In the context/face of climate change what challenges and opportunities do you see for the Caribbean in the short term (next 1-3 years)?
 - In the context/face of climate change what challenges and opportunities do you see for the Caribbean in the medium term (next 3-5 years)?
 - In the context/face of climate change what challenges and opportunities do you see for the Caribbean in the long term (next 5-10 years)?
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Questions and Topics #2

- How do you see these challenges and opportunities in relation to other long haul destinations such as Africa, Australia, New Zealand and small islands in the Pacific or Indian oceans? (e.g. is the Caribbean better off or worse off than other destinations?)
- What do you believe are the key information requirements for the Caribbean region in the face of climate change? (e.g. what are the knowledge gaps)



Questions and Topics #3

- What kind of assistance do you think the Caribbean region needs to be able to adapt and mitigate climate change?
 - What origin region do you see as most vulnerable to the impacts of government and voluntary initiatives reacting to climate change and will most affect the Caribbean in a negative way? And why?
 - Do you know of any initiatives in the Caribbean that exist to reduce the carbon footprint of tourism?
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Questions and Topics #4

- How do you think tourism to the Caribbean will develop / evolve under the 'rising costs of air travel' scenarios?
 - If through a combination of schemes such as 'offsetting', inclusion in ETS and programmes to reduce the carbon footprint of tourism in destinations the Caribbean became a 'carbon neutral' tourism region how do you think this would affect consumer demand for the region? And in the light of the 'increased cost of air travel' scenarios
 - Any other comments and discussion on the issues surrounding the topics of this report?
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CHALLENGES & OPPORTUNITIES





‘Caribbean not alone’

- Increased travel costs, (result of any combination of government taxes, fuel price increases, inclusion of aviation in emission trading schemes and/ or voluntary offsetting), will affect all medium and long haul destinations.
- Serious concern over rising costs but agreement Caribbean would not be alone in being affected resulting in a ‘level playfield’ for all destinations and regions competing in similar markets.



‘Source Markets’

- EU Travellers most likely to alter their travel patterns
 - high level of awareness of climate change issues;
 - desire of governments to act on the mitigation of climate change through increasing taxes;
 - increasing levels of ‘enviro-guilt’ in European traveling public driven by the media and voluntary offset companies
 - Canadians subject to pressures (!!!)
 - conflicting guilt damaging the economy and livelihoods - result no change
 - US less likely to reduce their demand for the region
 - eventually as awareness gradually raised
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‘Higher Yield Tourists’

- Concern - less tourists traveling to the Caribbean region in the medium-term (3-5 years) and long-term (5-10 years)
 - Believed in an increase in ‘higher value’ tourists i.e. those with a higher than average expenditure in the region.
 - Some destinations are actively targeting this higher yield market already for other less altruistic reasons.
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‘Decreasing Demand’

- Overall (combined) 10% increase in travel cost = 1-5% decrease in consumer demand for the region and that a 25% increase in overall travel costs to the Caribbean would result in a much larger decrease (15% +).





‘Carbon Neutral Tourism Region’

- If region became a carbon neutral tourist destination
 - generate media attention
 - create a positive, environmental image for the region,
 - encouraging more tourists to travel to the Caribbean.
 - compensate, in varying degrees, for the potential reduction in consumer demand
 - Strong support for the development and implementation of policies and strategies aimed at establishing the Caribbean as a carbon neutral tourist destination/region
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‘Push-Pull Factors’ #1

- Link between physical impacts and destination choice - shifting ‘push-pull’ factors (unfavourable climate condition in country/place of origin of tourists and favourable conditions at destinations).
 - Physical conditions at a given Caribbean destination deteriorate as a result of climate change, i.e. water shortages, increase in vector borne diseases such as dengue fever, loss of attractiveness due to coastal and shoreline erosion, biodiversity loss e.g. coral bleaching, coupled with increased prices = alteration of the usual ‘push-pull’ factors to the detriment of that destination.
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‘Push-Pull Factors’ #2

- Environmental actions conducted at destination level may address the physical impacts of climate change and raise the desirability of the destination to travelers who are more sensitive to environmental issues
 - These actions together with an increase in standards of service and levels of hospitality may compensate for increased costs encouraging more people to the destination.
 - However, tempered by some opinions that ‘price rules’.
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‘Livelihoods and SMMEs’

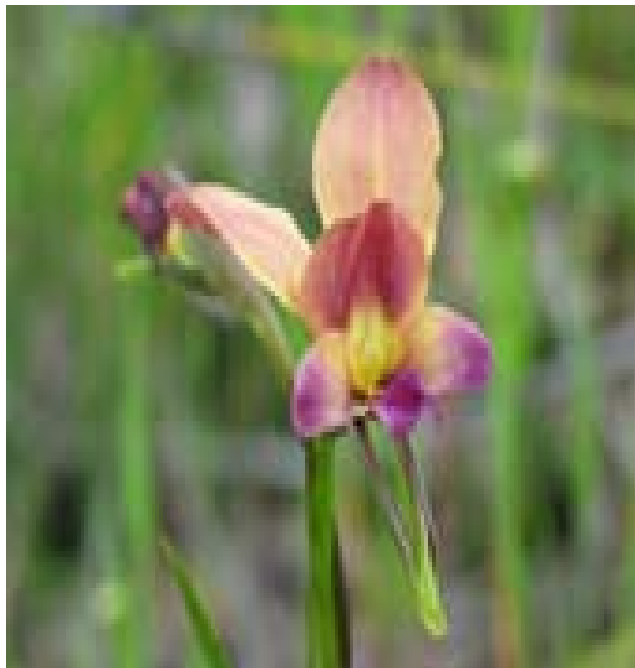
- Significant concern was raised over the social, economic and livelihood impacts of rising travel costs and climate change + food security, housing, and other poverty issues
- Small-medium and micro enterprises (SMMEs), (prolific in the Caribbean), particularly vulnerable





‘Additional Industry Sectors’

- Anxieties over related sectors and secondary industries
 - potential reduction in demand and climate change affect sectors such as agriculture, water, arts and crafts, food and beverage (restaurants), land use, finance, and construction. Energy use, security and efficiency esp.





‘Opportunities for Stakeholders and the Region’

- Potential for increasing links across different organizations or groups (stakeholders in the climate change and tourism nexus).

- opportunities identified for sectors to work in closer coordination or perhaps to be forced into working closer together due to the threats associated with climate change.

- water, energy, health, waste management, land use and agricultural = key

- benefits for the region were expected from international development agencies, banks and United Nations (UN) agencies working together

e.g. Canadian International Development Agency (CIDA), the German Development Agency (GTZ), the UK Development Agency (DFID), the UN Environment Programme (UNEP), the UN World Tourism Organization (UNWTO), UN Development Programme (UNDP), the World Meteorological Organization (WMO), World Bank, Inter-American Development Bank



‘Other Opportunities Identified’

- Climate change agenda result in more sustainable and diverse ‘energy mix’ in the region
 - i.e. increase in use of renewable energy technologies.
 - Another opportunity or benefit was expected to be the chance to re-examine policies relating to the environment and climate change
 - i.e. both the obvious and the not so obvious, opportunity to initiate a more thorough environmental assessment of the Caribbean region.
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‘Political Problems’

- Lack of cross-departmental and inter-ministerial collaboration was identified as a serious problem
- Political system (based on a 4 – 5 year term) tendency towards short-term goals rather than long-term view of the issues surrounding climate change.



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INFORMATION & ASSISTANCE REQUIREMENTS





Theme 1: Awareness Raising and Understanding #1

- Private sector not as engaged in awareness raising and understanding to great enough extent, government information to them is not sufficient. Involvement needs focus.
 - Priorities are not clear; should be better understanding of specific impacts, and difference between the short-, medium- and long-term issues
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Theme 1: Awareness Raising and Understanding #2

- General awareness is not the only or the main issue;
 - needs to be clarity concerning different tourism activities, geophysical issues and different sectors related to tourism e.g. how will climate change affect yachting, diving, fishing and other water sports individually; how will climate change affect agriculture, water, coastal zone management, biodiversity, energy and other sectors in specific nations and destinations.
 - Too often some knowledge is present but not transferred and developed into policy and implemented.
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Theme 2: Cooperation and Collaboration #1

- Inter-sectoral and inter-ministerial planning processes do not exist at anywhere near an appropriate or effective level.
 - problems of understanding and awareness in individual ministries as well as across ministries. Cohesive and effective policies are required.
- Cross-region and multi-national agreements and understandings need to be initiated with clear set of actions to be implemented.





Theme 2: Cooperation and Collaboration #2

- Developed nations need to do more in the mitigation of climate change.
 - Greater leadership required for Caribbean region and for collaboration of nations, increased diplomatic and negotiating skills in the international arena are essential, currently there is fragmentation.
 - The private sector and the public sector should have stronger links and cooperative agreements.
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Theme 3: Data, Studies, Projects and Funding #1

- Sufficient and effective tools and instruments not available to assess the situation on a destination, national or regional level. Rhetoric not enough - strong scientific basis is required for studies in the region.
 - More and easier accessibility to funding required to conduct the necessary research and develop practical tools and implement effective strategies. Funding should also be sourced for monitoring programmes.
 - More in-depth and thorough studies required at all levels; data is required at all levels and in all relevant sectors. Needs addressing in terms of data collection, collation and availability.
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Theme 3: Data, Studies, Projects and Funding #2

- Large-scale projects are specifically required addressing the needs of destinations, nations region - sectoral approach i.e. address tourism through its integral sectors e.g. energy, water, waste, agriculture, biodiversity, coastal planning
- Environmental audits must be embedded into the culture of Caribbean nations.





Theme 3: Data, Studies, Projects and Funding #3

- Meaningful, responsive and continuous set of indicators required for differing sectors and different aspects - Following the collection of baseline data - a regular monitoring programme 'Snapshots' of the situation are not sufficient.
 - Incentives from the state are required for the private sector to encourage emissions reduction and to facilitate decision-making i.e. tax waivers on energy saving devices.
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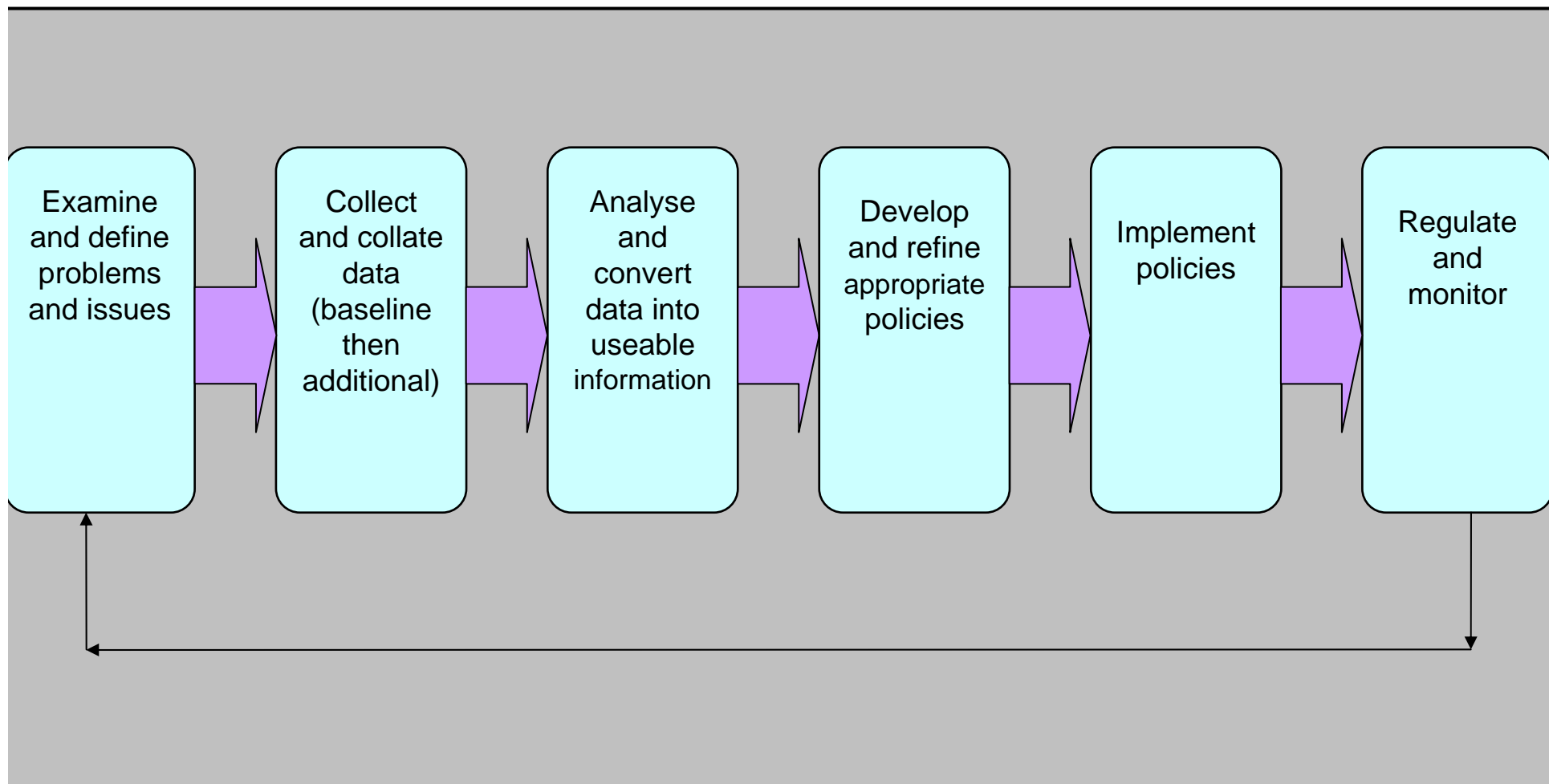
Information and Assistance Requirements - DATA

- Themes and individual subject areas focusing on 'requirements' and 'knowledge gaps' overlap and coincide in many areas
 - Most acute and most frequent = data, monitoring, policy development and implementation.
 - Figure illustrates key areas in critical need of development to strengthen the position of the Caribbean
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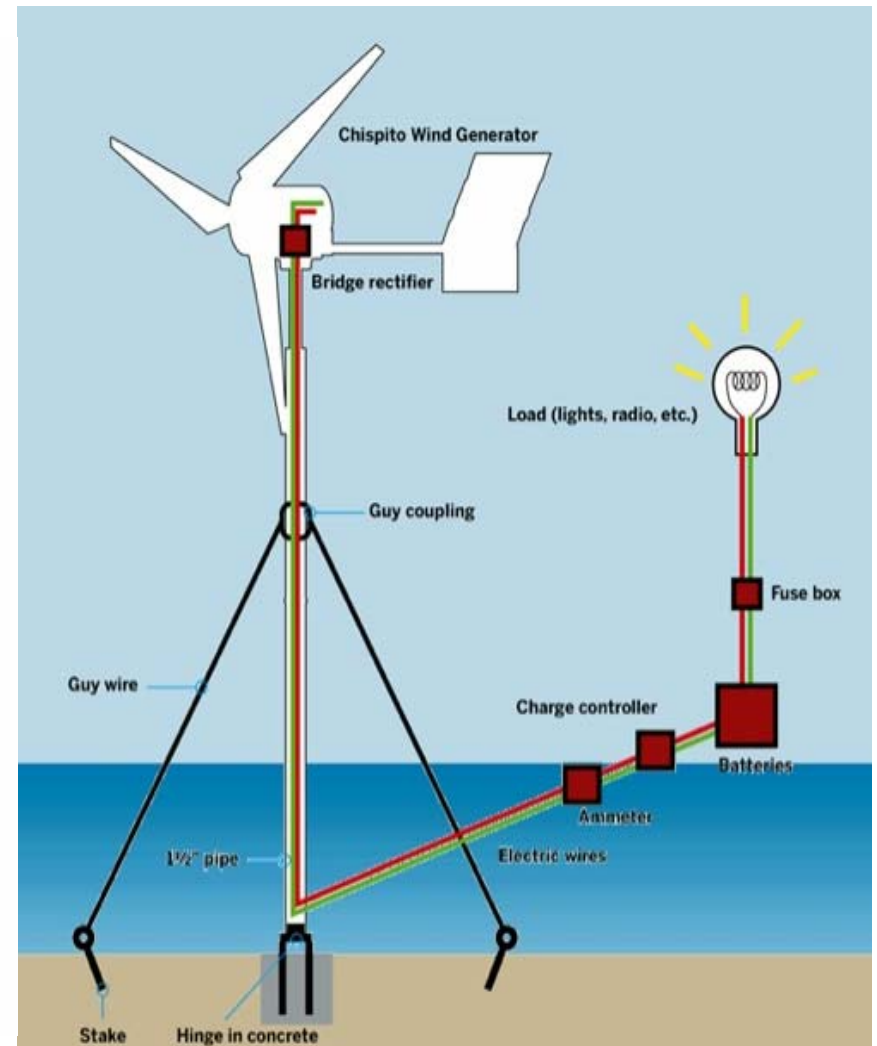
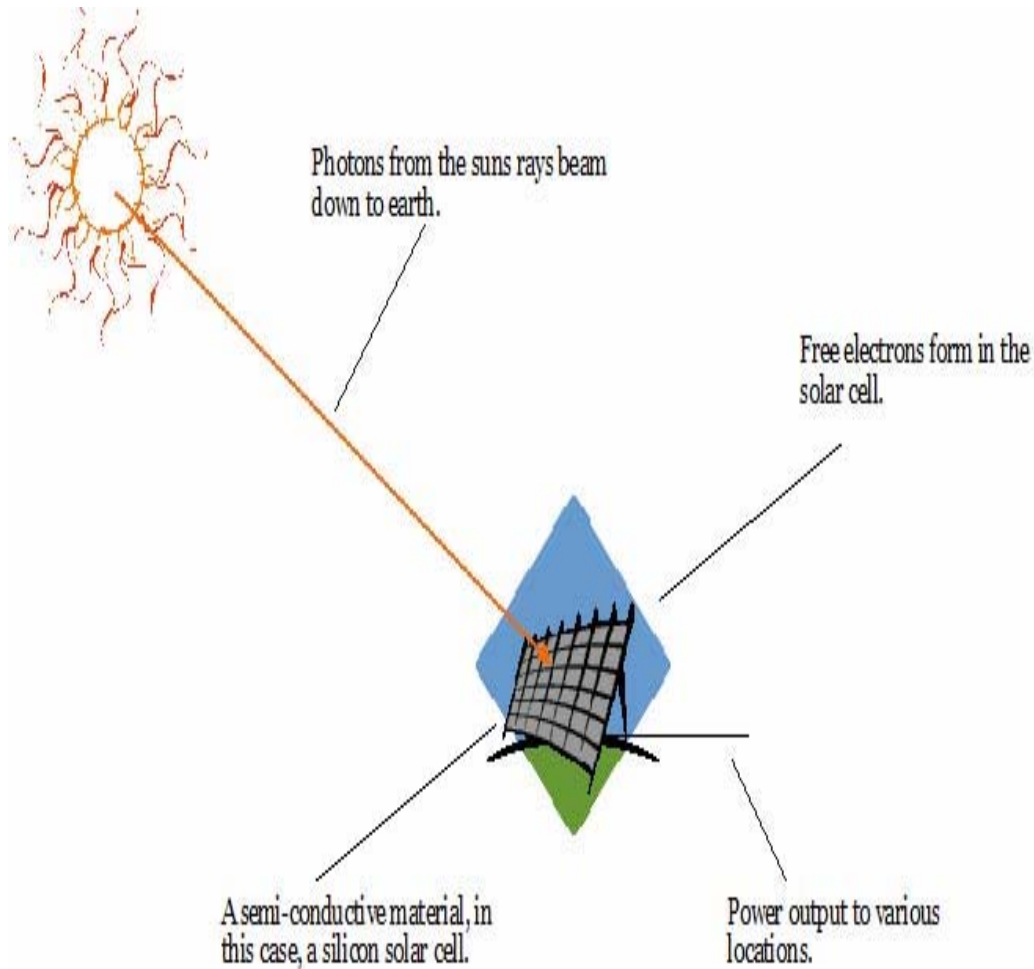
Information and Assistance Requirements - DATA

The Caribbean Climate Change Information and Implementation Nexus





RENEWABLE ENERGY OPTIONS





Energy in the Caribbean #1

- Power generation on a macro/national scale, no viable alternatives competing on price with oil (or coal or natural gas) in the countries where their use is a feasible option. (CARLIEC)
 - Most Caribbean islands too small for present nuclear power technology and commercial power generation based on hydrogen technology not expected to be available until the distant future.
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Energy in the Caribbean #2

- CARILEC's Position Paper on Energy Policy January 2008
 - in the past five years increased need has arisen for establishing an Energy Policy in states
 - paper states major factors driven Caribbean Governments towards energy policy initiatives:
 - increased oil prices;
 - the dependency on oil;
 - security of supply;
 - environmental concerns;
 - no economies of scale,(particularly on smaller islands of the Caribbean).





Energy in the Caribbean #3

- Situation encouraged national governments and utility companies to explore more closely the best possible and economically most feasible options in the field of renewables.
 - CARILEC report obvious options are: wind power, biomass, geothermal, ocean thermal, hydropower and bio-options like ethanol, landfill gas, palm oil/jatropha plant oil. Indirectly, solar power could also reduce the power demand when solar water heating is used instead of electric water heating.
 - CARILEC annex to Caricom Draft Energy Policy - section refers specifically to renewable energy sources with the aim to reduce dependence on fossil fuels
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Energy in the Caribbean #4

- CARICOM secretariat also promoting use of renewable energy and transformation of renewable energy markets - execution of the Caribbean Renewable Energy Development Programme (CREDP)
 - Proposal to the European Development Fund for assistance in the sustainable management of energy resources.
 - However, CARILEC Draft Energy Policy recommendations likely to state renewable energy applications be technically and economically feasible and/or in line with govt. targets (subsidized in case of non economic feasibility), and energy efficient.
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Renewable Energy Options: The Challenges #1

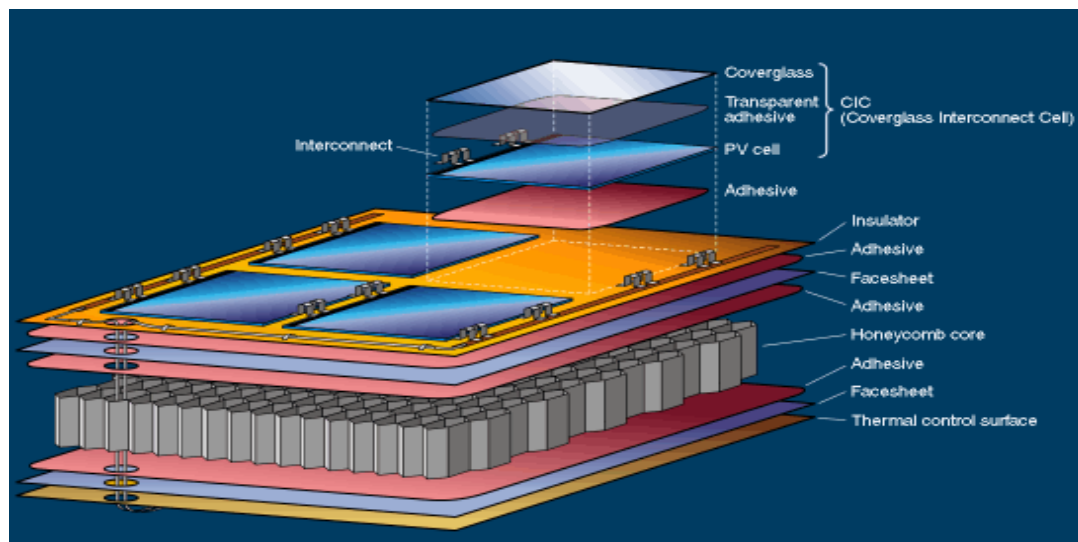
- **Solar:** Used quite widely in Barbados mainly due to the incentives provided by government and focuses primarily on water heaters.
- Solar companies in Barbados and St. Lucia have though, extended their services to other CARICOM states.
- Obvious interest and potential BUT solar very expensive to install and in reality only subsidy makes it feasible (this is also the case in other countries such as Germany and France).





Renewable Energy Options: The Challenges #1

- **Solar:**
- National utilities are currently not considering solar as an option
- Remains an option for individual hotels for logistically geographic and economic reasons (and possibly marketing purposes). In such cases solar power in the Caribbean is often more reliable than traditional energy sources.





Renewable Energy Options: The Challenges #2

- **Wind:**
- One of the most viable, (along with solar), also expensive to install and off shore wind farms in particular extremely so.
- Throws out any sense of economic benefit.
- National utilities are considering an energy mix that sources a maximum of 25% of their energy from wind power.
- Problems stem from land use; aesthetics; cost of acquiring land and competing interests





Renewable Energy Options: The Challenges #3

- ***Geothermal:***
- Islands that could seriously consider geothermal power (from volcanic activity) include Montserrat, St. Vincent and St. Lucia.
- Exploratory costs extremely high - capital costs very expensive.
- Energy source very reliable but gases used highly corrosive increasing the cost of installation making economies of scale unrealistic.
- Discussion about Dominica supplying Guadeloupe with power from a geothermal system - concept stage.





Renewable Energy Options: The Challenges #4

- **Biofuels:**
- 'Jury is still out'
- Sugar cane and banana industries decline as a result the use of sugar attracted interest of politicians, particularly from a 're-employment' perspective.
- St. Kitts have had Brazilian energy consultants studying the possibilities on the island.
- Critical issue for small islands is economies of scale.





Renewable Energy Options: The Challenges #5

- **Hydro:**
- Dominica and St Vincent both use as part of their energy mix, only small percentage.
- Not fully reliable due to varying volumes of water and the power plants on these islands are not producing their capacity or even near to it.
- Small islands too vulnerable for truly practical option.





Renewable Energy Options: The Challenges #5

- **Hydro:**
- Guyana, investigating a 11,000 megawatt hydro power plant to supply a number of Caribbean islands ultimately as far north as Puerto Rico.
- Concern - issue of the sovereignty of the production and supply of power, (lies in the hands of each individual Caribbean state).





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INITIATIVES TO REDUCE CARBON FOOTPRINT OF TOURISM





Renewable Energy Options: Micro/Individual #1

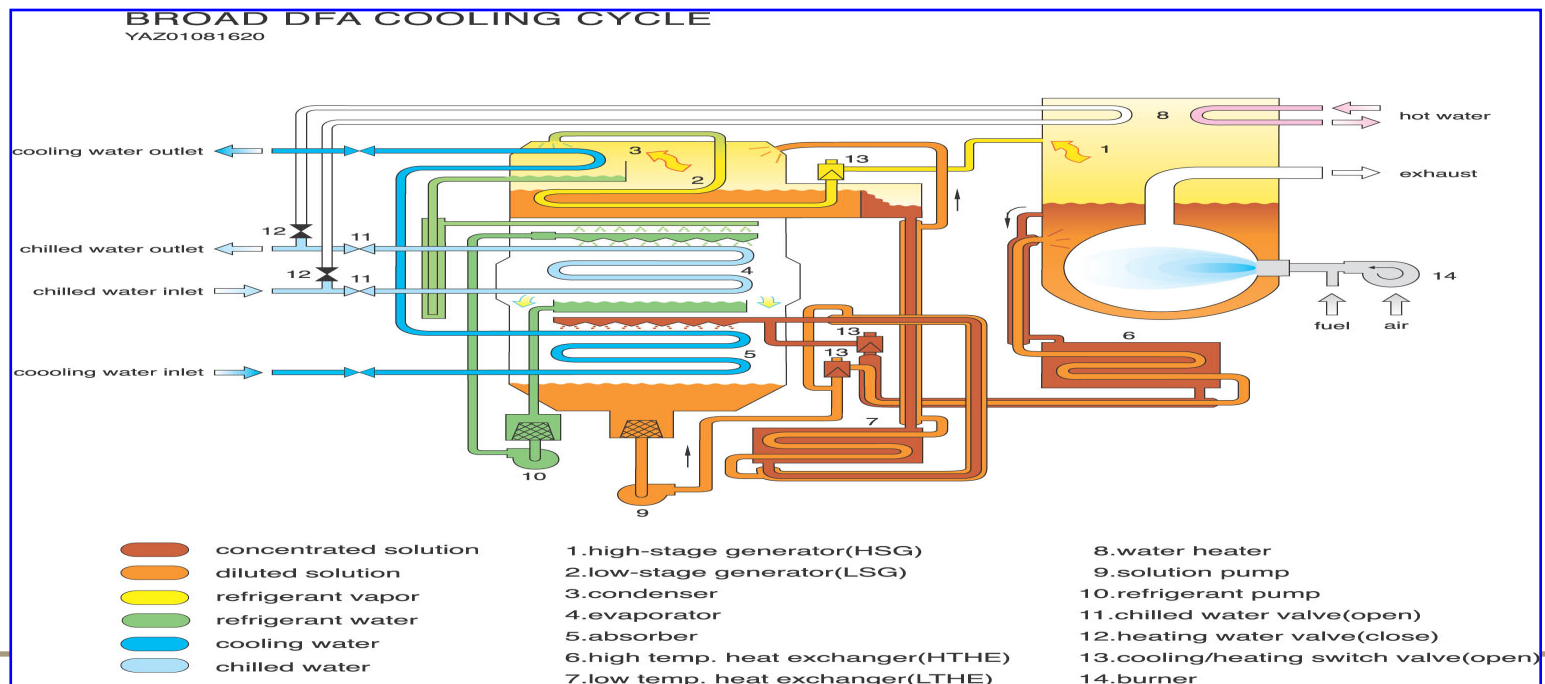
- User scale, number of energy conservation technologies implemented individually or in combination to achieve lower costs and lower carbon emissions.
- Include guest room controls for hotels, high efficiency air-conditioning systems and solar hot water systems
- Energy Saving Options, low flush, low flow, timers, occupancy





Renewable Energy Options: Micro/Individual #2

- Popularity of absorption cooling systems low maintenance, waste heat reused to fuel absorption chiller provide cold water for cooling and hot water for heating - not into atmosphere
- Fuels inc. liquid petroleum gas, solar and biogas, reducing costs individual hotels + carbon emissions.
- Accra Beach Hotel and the Crane Resort in Barbados.





Selected Examples of Tourism Initiatives...

- Range includes:
 - Reduction of Aviation Emissions – *'Nature Air'*, Costa Rica
 - Environmentally Friendly Ships – *Florida/Caribbean Cruise Ass.*
 - Renewable Energy System for Hotels (Cost and Emissions)
 - Energy Conservation Systems (Cost and Emissions)
 - Off-Setting Travel to Resorts – *Bucuti Beach Resort*, Aruba
 - Reducing Emissions from Imports (e.g. food stuffs, curios,)
 - Tax Incentives – solar and energy conservation, *Barbados*
 - Design and Technology in construction – *OBM International*
 - Contribution to Biodiversity (off-sets)-*Mocking Bird Hill*, Jamaica
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CARBON NEUTRALITY & MITIGATION





Mitigation for tourism businesses or institutions #1

- A successful mitigation policy could consider 4 main steps towards a practical response to climate change.
 - **1. Eliminate** the emission of greenhouse gases by keeping away from activities that can be avoided without a considerable change on the tourism's product or service quality.
 - **2. Reduce** the emission of greenhouse gases by focusing on energy efficiency practices in specific activities.
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Mitigation for tourism businesses or institutions #2

- **3. Substitute** practices that are responsible for a big amount of greenhouse gases emissions with practices that have a lower climate footprint.
 - **4. Offset** remaining emissions to achieve full carbon neutrality.
 - Not a linear sequence, but an iterative cycle of problem implementation of practices and evaluation of outcomes, feedbacks between steps.
-



Mitigation for tourism businesses or institutions #3

- In addition, each business unit or institution of the tourism sector is connected to three distinct but interrelated “activity spaces”.
 - A. “**internal operations**” - a company or an institution can implement directly practices to achieve climate neutrality. 100% the **decision** of company to implement these practices.
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Mitigation for tourism businesses or institutions #4

- **B. “supply chain”** - a company or institution could seek to find practices that its supply chain members implement in their internal operations. Although a company can not decide on the internal operations of its supply chain partners it is the company’s **choice** that can make the supply chain more sustainable.
 - **C. “community/consumers”** activity space a company can **influence** the choices of its customer’s and communities.
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CARBON NEUTRAL DESTINATIONS





Carbon Neutral Destinations #1

- Increasing number of destinations announcing plans to become “carbon neutral”
 - Often a response strategy to increasing pressure on the tourism industry to reduce its emissions of greenhouse gases.
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Carbon Neutral Destinations #2

- “Carbon Neutral”, destinations hope to mitigate their contribution to global warming, maintain and develop their tourism industries, and to simultaneously enhance their image as being environmentally pristine and sustainable.
- Costa Rica, Norway, Scotland, Sri Lanka have been the first countries to publicly announce the goal of “carbon neutrality”, focusing on or including their tourism industries.
 - Credibility? – Efficiency ?



Carbon Neutral Destinations #3

- Destinations as entities have a large potential to contribute to reductions of greenhouse gases. They can become role-models in achieving low-carbon tourism products.
 - A destination comprises the micro-cosmos of the tourism production system, i.e. transport infrastructure, accommodation, activities, as well as various actors including tour operators, tourism marketing organizations, etc.
 - These can work together in order to reduce emissions from tourism and to create carbon-neutral destinations.
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Carbon Neutral Destinations #4

- 3 steps for destinations to become carbon neutral.
 - Step 1 (measurement)
 - the destination assesses its emissions to better understand where these originate and where it is most economic to reduce these.
 - Recent assessments of tourism's contribution to greenhouse gas emissions have focused on three sectors, transports, accommodation and activities. A meaningful system boundary for transports has been suggested to comprise all energy use within the destination, including fuel bunkered for all transports.
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Carbon Neutral Destinations #5

- Step 2 (decarbonisation)
 - the destination seeks to minimize energy use and to switch to renewable energy to the largest extent possible.
 - Economically, this may translate into efficiency- or renewable energy infrastructure investments paying off in less than 10 years.



Carbon Neutral Destinations #6

- Step 3 (offsetting)
 - destinations seek to buy carbon offsets for remaining emissions.
 - There are many emission reduction units on offer, with a lower or higher degree of credibility. It is recommended that destinations considering the purchase of carbon credits use Gold Standard Certified Emission Reductions, which are registered by UNFCCC and fulfil the requirements of delivering sustainable development benefits
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Carbon Neutral Destinations #7

- The decision to become a climate neutral destination has to be taken collectively !!!!
 - i.e. by a majority of tourism stakeholders and sectors in order to generate strong support for the system.





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LUNCH

