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COASTAL TOURISM & CLIMATE CHANGE

4th Asia-Pacific Climate Change Adaptation Forum,
1-3 October 2014,
Kuala Lumpur, Malaysia

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In Partnership…..

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- Supporting and enhancing livelihoods, economies and environments around the world
- INTASAVE-CARIBSAVE specialise in innovative climate change solutions and sustainable international development
- Global not-for-profit organisation with offices in Africa, Caribbean, Asia-Pacific, UK and China; operations in over 30 countries.

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Tourism Environmental Challenges

Changing Climate - Changing Coasts

- Rising sea levels
- Intense storms and rainfall events, and coastal siltation
- Beach Erosion
- Higher water temperatures
- Coral Bleaching
- Fish migration
- Ocean acidification

Coral Reef – *Coastal Fabric of Asia-Pacific*

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IPCC AR5 for Asia – C14

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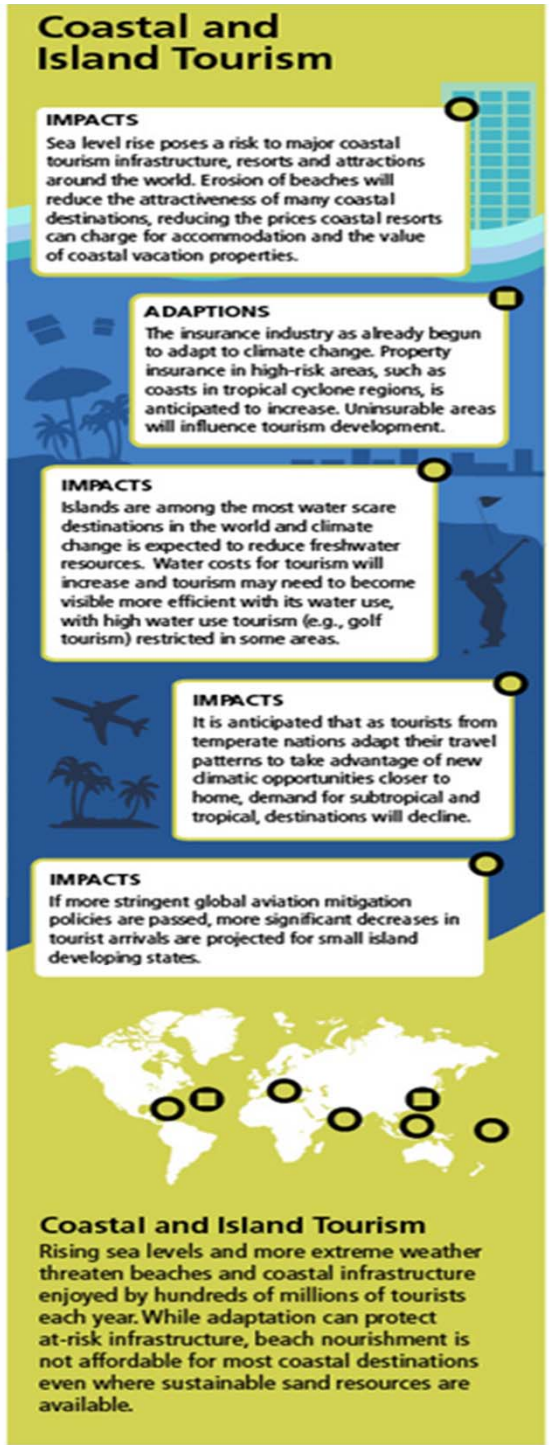
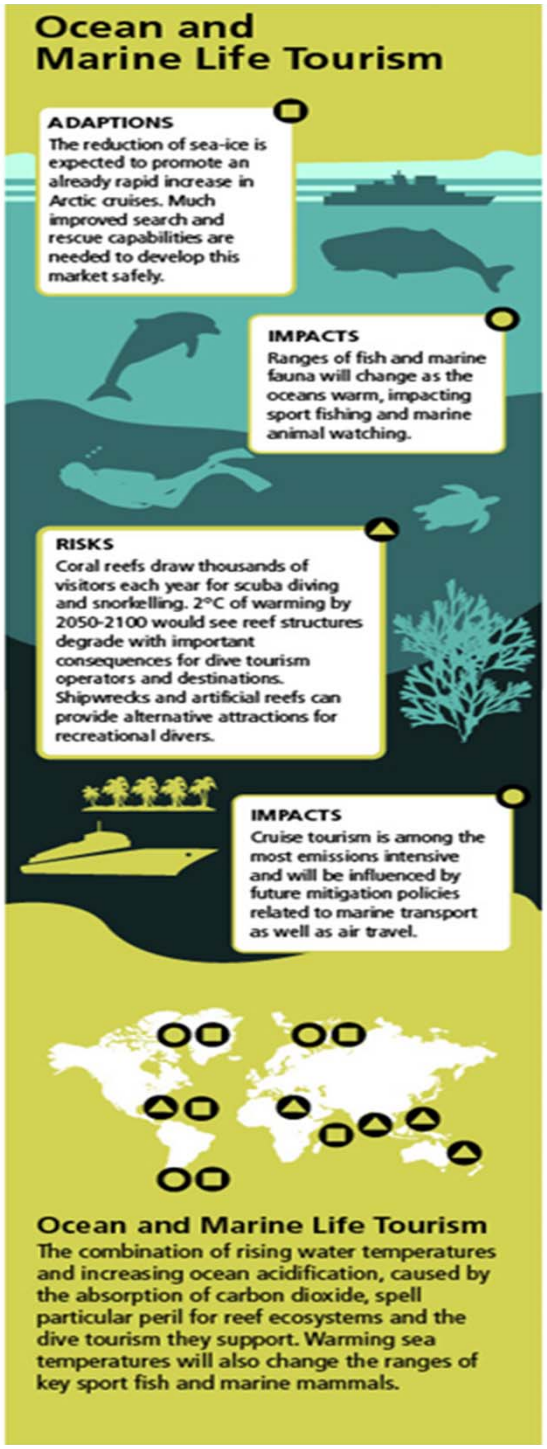
- **Observed climate change**
- *Warming trends and increasing temperature extremes* have been observed;
- **Projected climate change**
- ***Tropical and Extra-Tropical Cyclones*** - *likely* to vary by region in the future and uncertain frequency and intensity.
- *Monsoons* are very likely to increase in East, South and Southeast Asia.
- **Impacts & vulnerabilities**
- Multiple stresses caused by rapid urbanization, industrialization and economic development will be compounded by climate change
- The impacts of on food production & food security in Asia will vary by region with many regions to experience a decline in productivity
- Sealevel rise will inundate low lying areas and will especially affect rice growing regions.
- **Water is expected to be a major challenge** for most of the region due to increased water demand and lack of good management
- **Coastal and marine systems and coral reefs in Asia** under increasing strain
- Extreme climate events will have an increasing impact on human health, security, livelihoods, and poverty.





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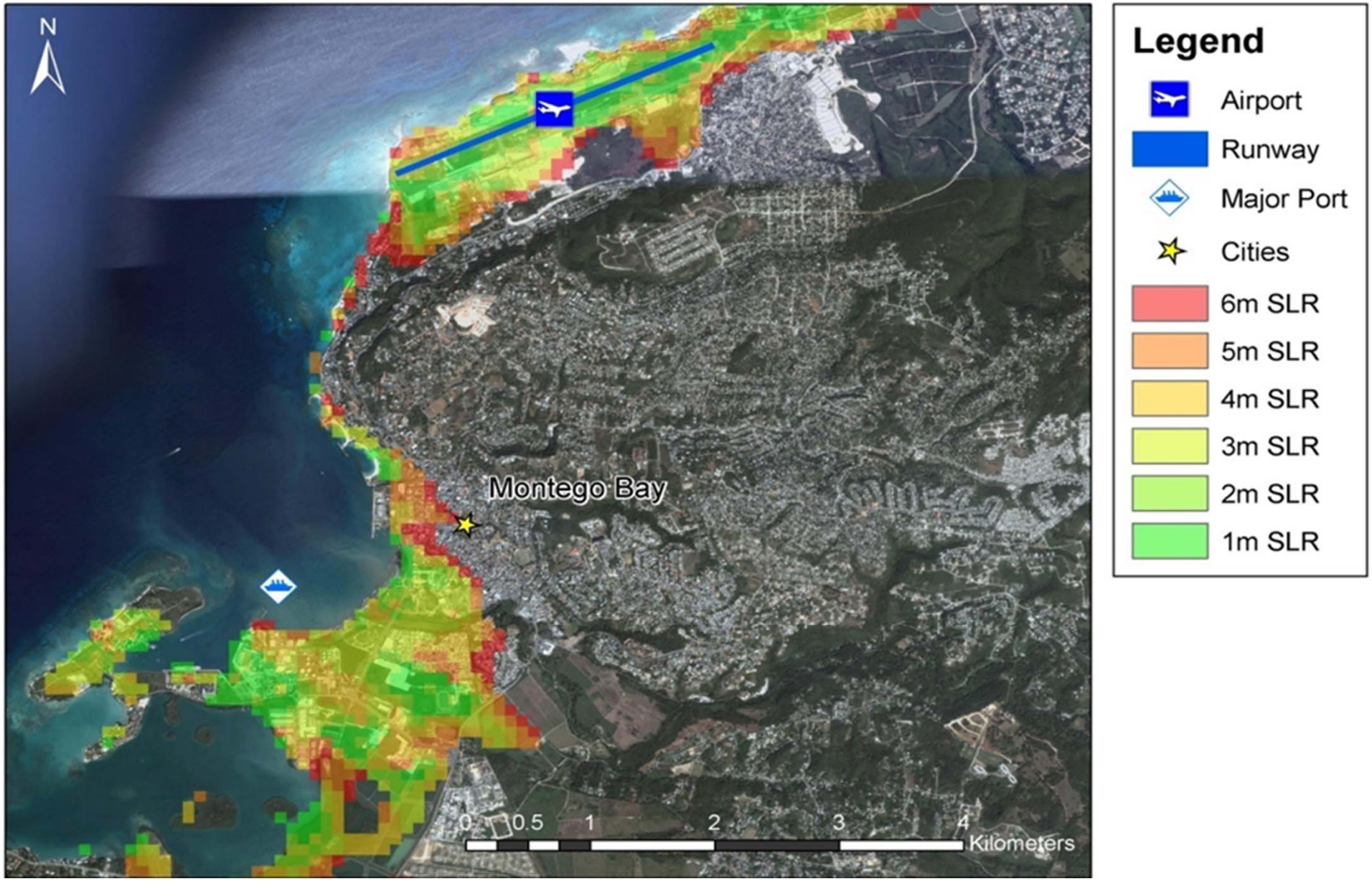
ECF/WTTC (INTASAVE 2014)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4m SLR
3m SLR
2m SLR
1m SLR

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Data SIO, NOAA, U.S. Navy, NGA, GEBCO

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Adaptation for the Tourism Industry

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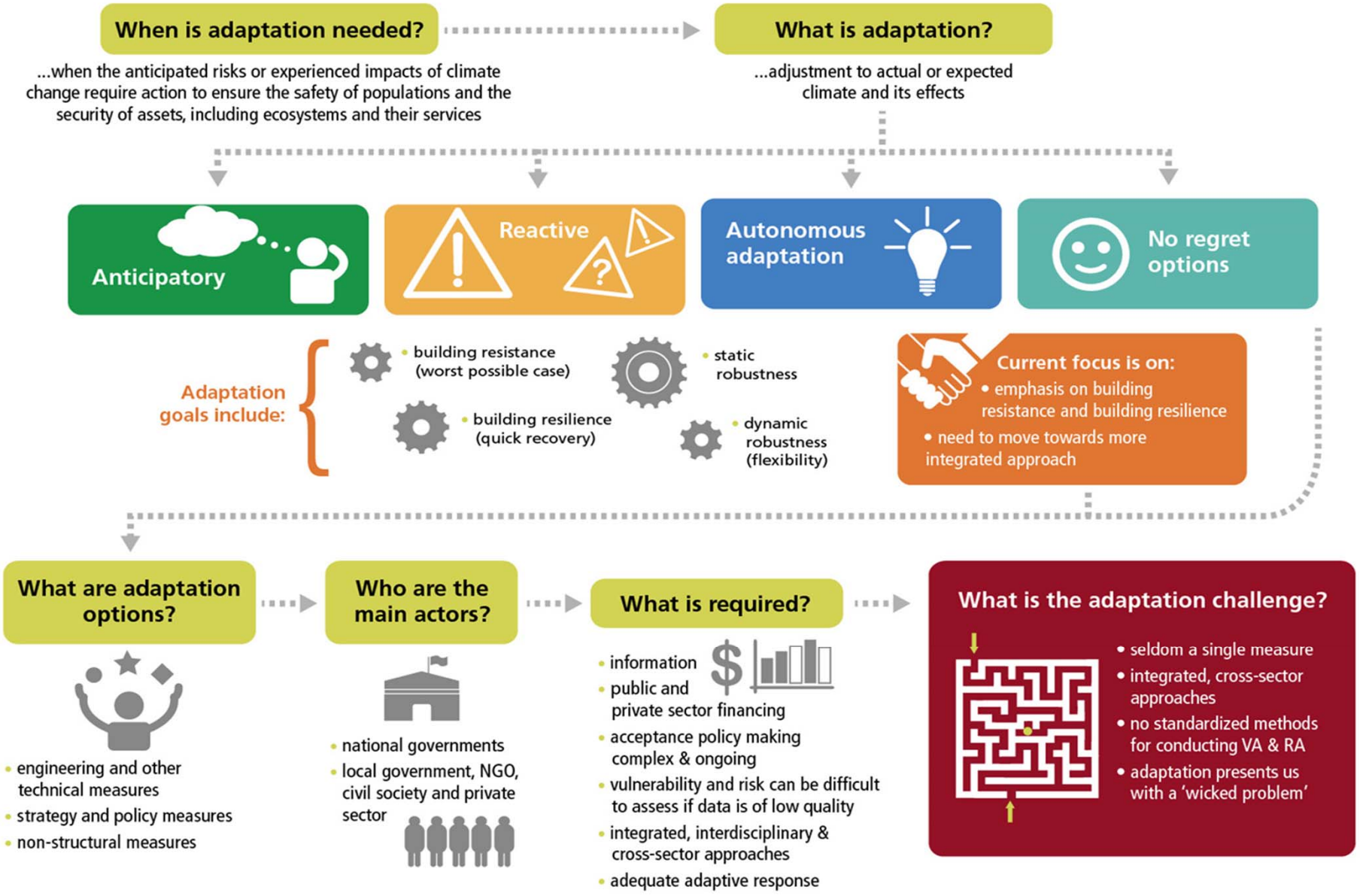

Inter-Sectoral linkages and Tourism

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Climate Change impacts on other sectors

Adaptation response measures (policy, regulatory)

All adaptation response measures, regardless of sector, have limits by other sectors

EXAMPLES OF INTER-SECTORAL LINKAGES BETWEEN TOURISM AND OTHER SECTORS

Climate impacts and adaptation/mitigation measures taken by these sectors can have policy, regulatory and physical risk implications for the tourism sector

1 Insurance Industry

- adaption to climate change
- implications of climate change for the insurance sector
- regulatory changes
- costs and availability
- business implications important

Adaptation Measure

- economic-vulnerability reduction via insurance & risk transfer systems

Climate Impacts & Associated Risks

- affects insurance systems
- as industry adapts the costs and availability of public and private sector insurance will change

2 Transport

Climate Impacts & Associated Risks

- change affects infrastructure
- infrastructure malfunctions if the weather is outside the design range
- infrastructure vulnerable to temperature extremes

Examples:

- susceptible to increases in precipitation, flooding and subsidence, sea level rise, extreme events and incidence of freeze-thaw cycles

- increased temperatures pose a threat to underground transport systems that will see a burden on increased need for cooling systems

- limitations for freight capacity, safety and weather-related delays, storminess, turbulence

3 Water Services

Climate Impacts & Associated Risks

- vulnerable to extreme weather

Adaptation Measure

- understanding position of tourism in inter-sectoral water rights/priorities is critical
- management & conservation

4 Energy Supply & Demand

Climate Impacts & Associated Risks

- energy demand
- changes in temperature could thus affect energy demand and therefore price for hoteliers and operators

5 Animal & Crop Production

Climate Impacts & Associated Risks

- food access, utilization, and price stability

Engineering Options – Approach/Examples

- Sound science, detailed planning and intensive modeling
- Integrate climate change knowledge and expertise
- Public consultations
- Quality engineering
- Maintenance and monitoring
- Soft and Hard!
- Integrated with management of coastal ecosystems – coral reef

Beach Stabilisation & Marine Conservation

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Ecosystem- Based Adaptation

" Ecosystem-based adaptation (EbA) harnesses the adaptive forces of nature and provides one of the most widely applicable, economically viable and effective tools to combat the impacts of climate change.

The low-cost, flexible approaches of EbA can also provide multiple other benefits, such as poverty alleviation, sustainable development, carbon storage and biodiversity protection."

Dr Pam Berry, Environmental Change Institute, University of Oxford
Science for Environment Policy
THEMATIC ISSUE: Ecosystem-based Adaptation
March 2013 Issue 37

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Key Stages in Ecosystem-Based Adaptation

Stage 1 – Good Scientific Understanding of Ecological and Social System

Stage 2 – Appropriate Policy Frameworks and Planning

Stage 3 – Making it Happen: Incentives for short, medium and long Term

Administer Grants and Provide Technical support
Focus on livelihoods
Sectors; MSMEs & Big Business e.g. tourism
Develop Partnership with Private sector
Sustainable financing linked to local livelihoods
Innovative solutions – hard/soft engineering
Focus on Gender – the role of women

Example of INTASAVE's Tourism Work

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- Climate Change Risk Atlas; 15 Countries
- Quantification & Magnitude; SLR Loss and Damage
- Climate Change Vulnerability, Impact and Adaptation Analysis in the Caribbean Region, 2013
- Climate Change, Coastal Community Enterprises – Adaptation, Resilience and Knowledge (CCCCE-ARK) Project, 2012
- EU Sustainable Tourism Indictors, 2012
- Caribbean Fish (C-Fish) Sanctuaries Initiative, 2009
- Domestic policy work & advice for governments in SIDS

- 10 major projects profiled in our leaflet

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