



# **Understanding Environmental and Climate Change Vulnerabilities of SIDS**

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# The SIDS Landscape

- **Multiple Crises**: global food, financial and energy crises affecting socio-economic fabric of the SIDS
- **Natural Disasters**: Increased frequency and intensity of extreme weather events e.g. cyclones, floods, droughts – some related to Climate Change
- **Environmental vulnerabilities**: Fragile ecosystems esp. in coastal areas, coral bleaching, threat of sea level rise especially for low-lying islands



# Climate Change Impacts

- **Environmental impacts**: sea-level rise, coral bleaching, biodiversity loss, acidification of oceans, freshwater scarcity, etc.
- **Economic impacts**: loss of agricultural land and infrastructure, negative impacts on fisheries, etc.
- **Social impacts**: threat to human security, health, destruction of human settlements

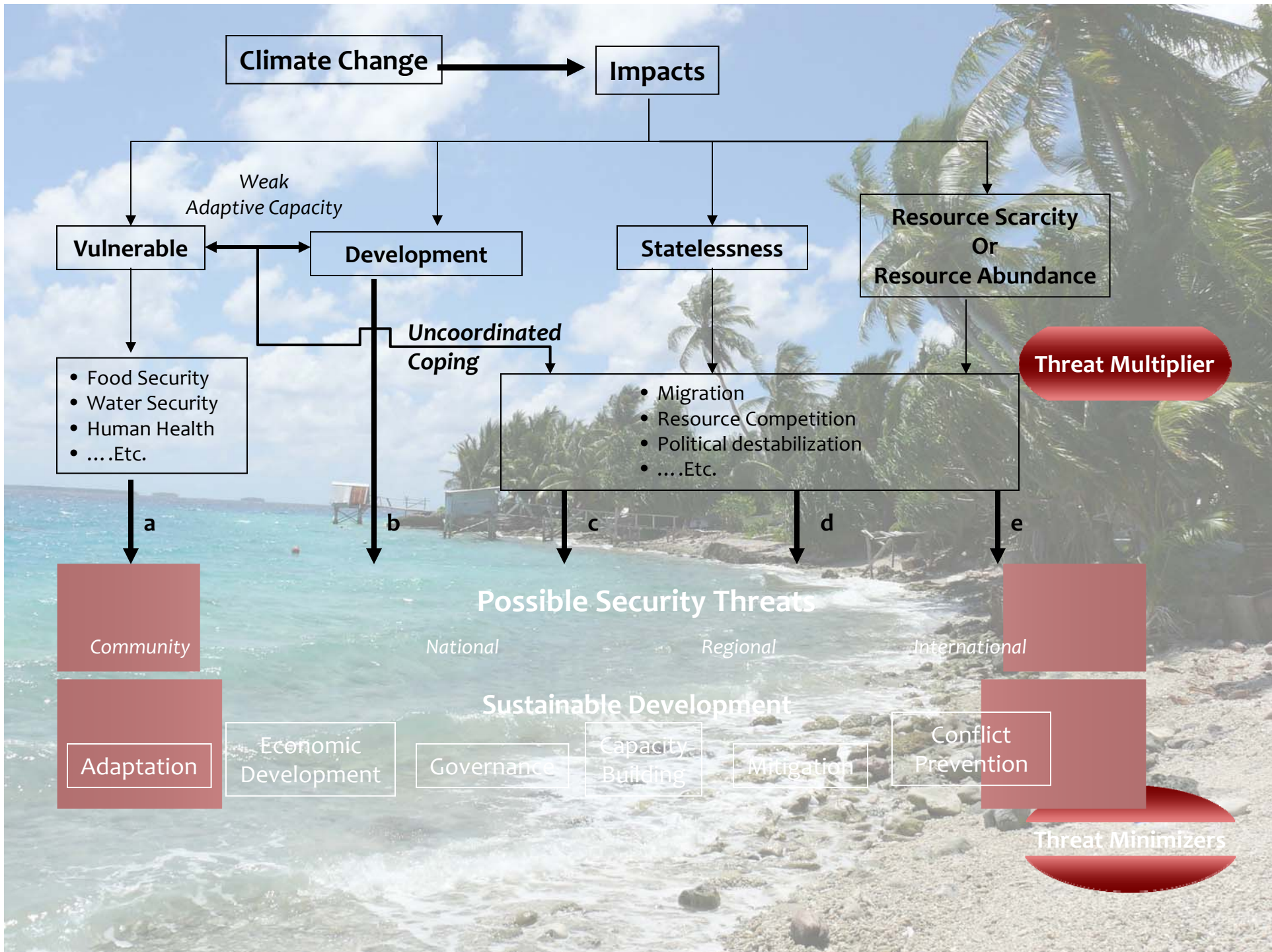


# **Climate change and its possible security implications**

A tropical beach scene with palm trees, turquoise water, and a rocky shore. The sky is blue with white clouds. The text is overlaid on the top left of the image.

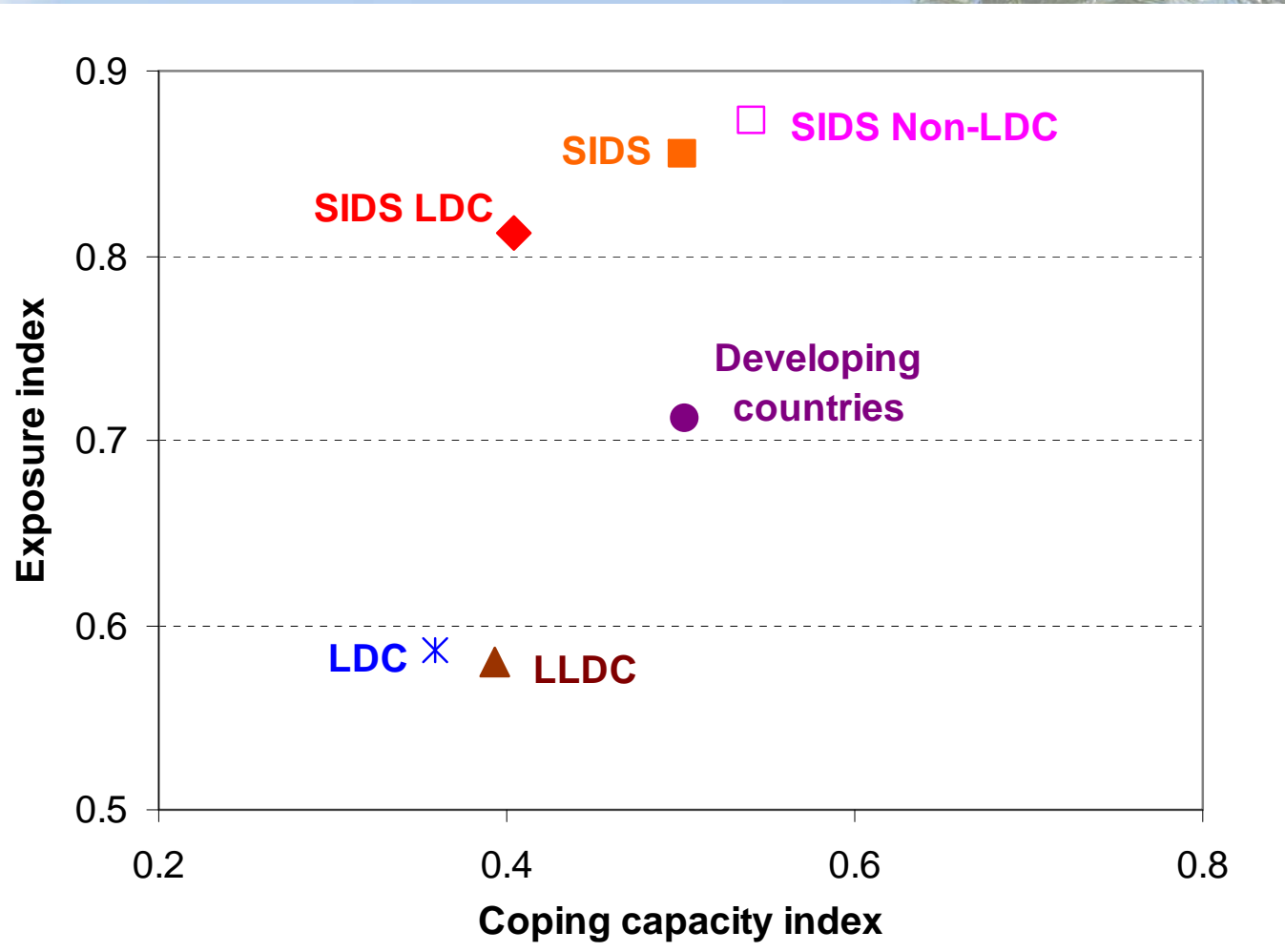
- Vulnerability
- Development
- Coping capacity
- Statelessness – threatening the very existence of SIDS
- International Conflict





# Economic crisis vulnerability

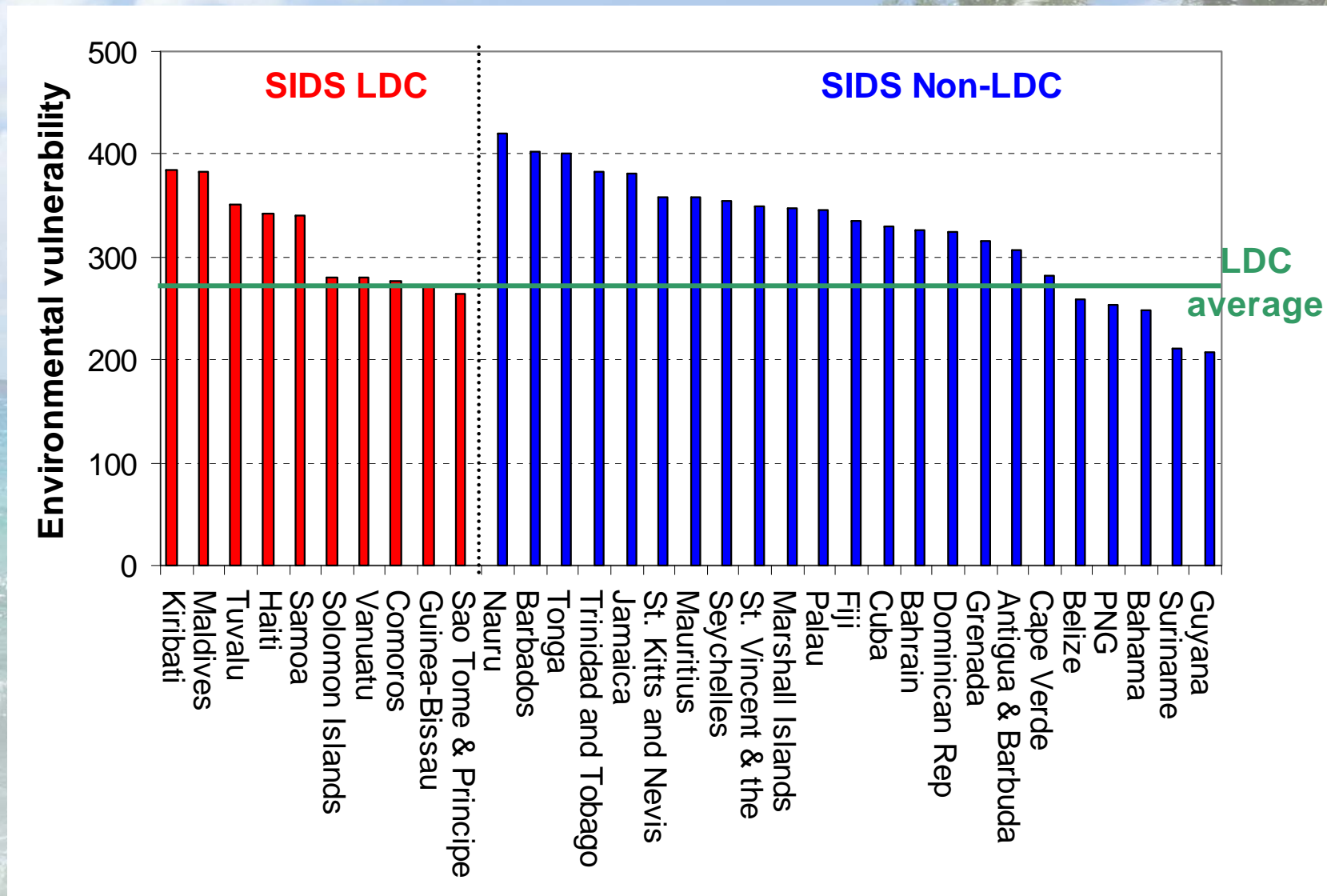
*SIDS highly vulnerable due to exposure regardless of coping capacity*



Source: ESCAP/UNDP/ADB (Sept. 2009), based on data for 24 SIDS world-wide.



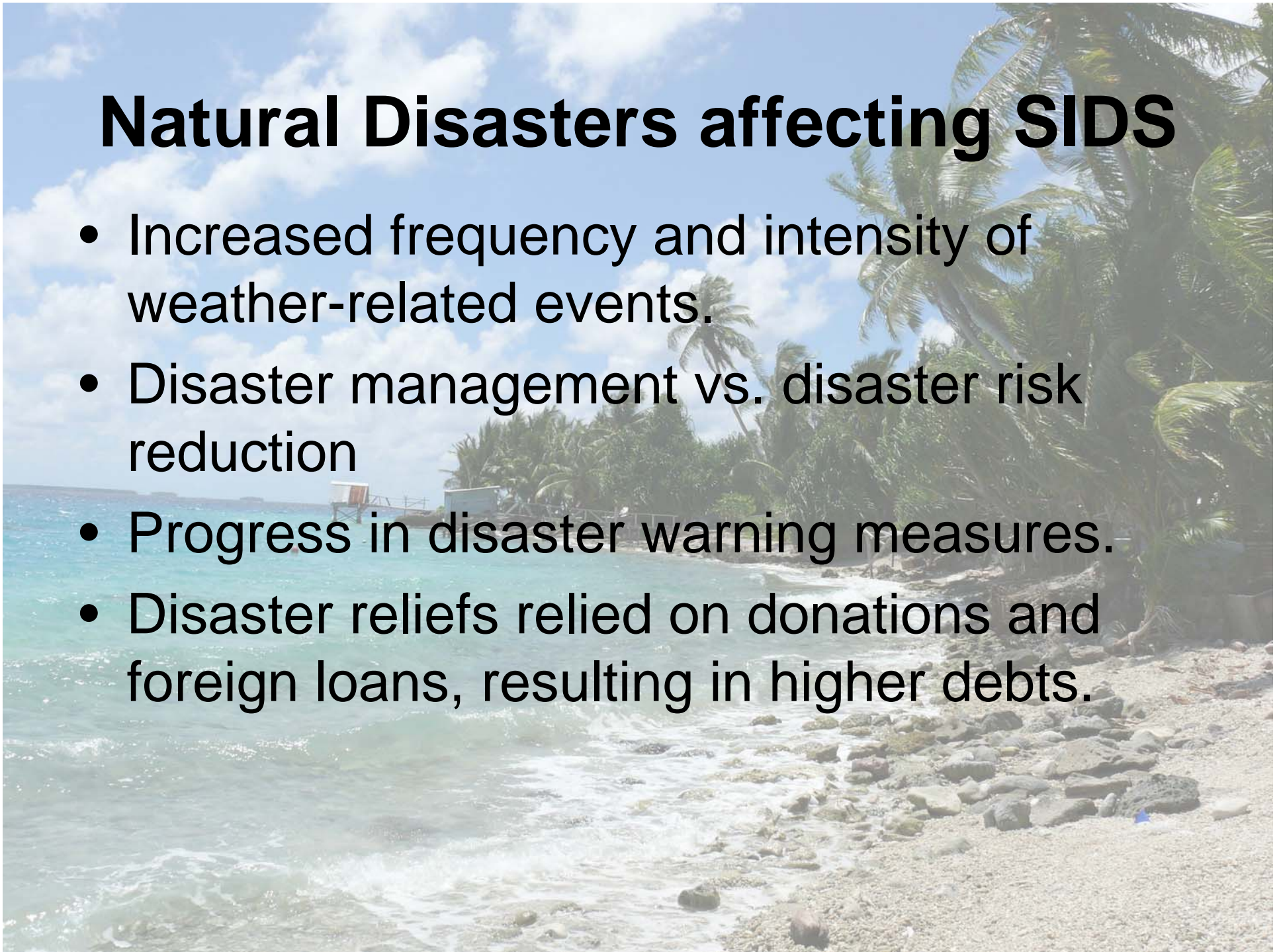
# Environmental vulnerability of most SIDS higher than LDC average



Source: UNEP/SOPAC environmental vulnerability index

# Natural Disasters affecting SIDS

- Increased frequency and intensity of weather-related events.
- Disaster management vs. disaster risk reduction
- Progress in disaster warning measures.
- Disaster reliefs relied on donations and foreign loans, resulting in higher debts.





# The 19 MSI themes address intrinsic vulnerabilities of SIDS

Climate change and sea-level rise	Transport and communications
Natural and environmental disasters	Trade
Management of wastes	Science and technology
Coastal and marine resources	Graduation from LDC status
Freshwater	Tourism
Land resources	Energy
Biodiversity	Health
Sustainable production and consumption	Knowledge and information management
Sustainable capacity development and education	National and regional enabling environments
	Culture

# Five-year review outcome: Climate Change

- Most SIDS ratified the Kyoto Protocol
- Accession have not sufficiently helped access to low-carbon technologies
- Limited validation and implementation of CDM projects by SIDS.
- CO<sub>2</sub> emission per capita in SIDS higher.
- Efforts made to carry out climate-change adaptation projects



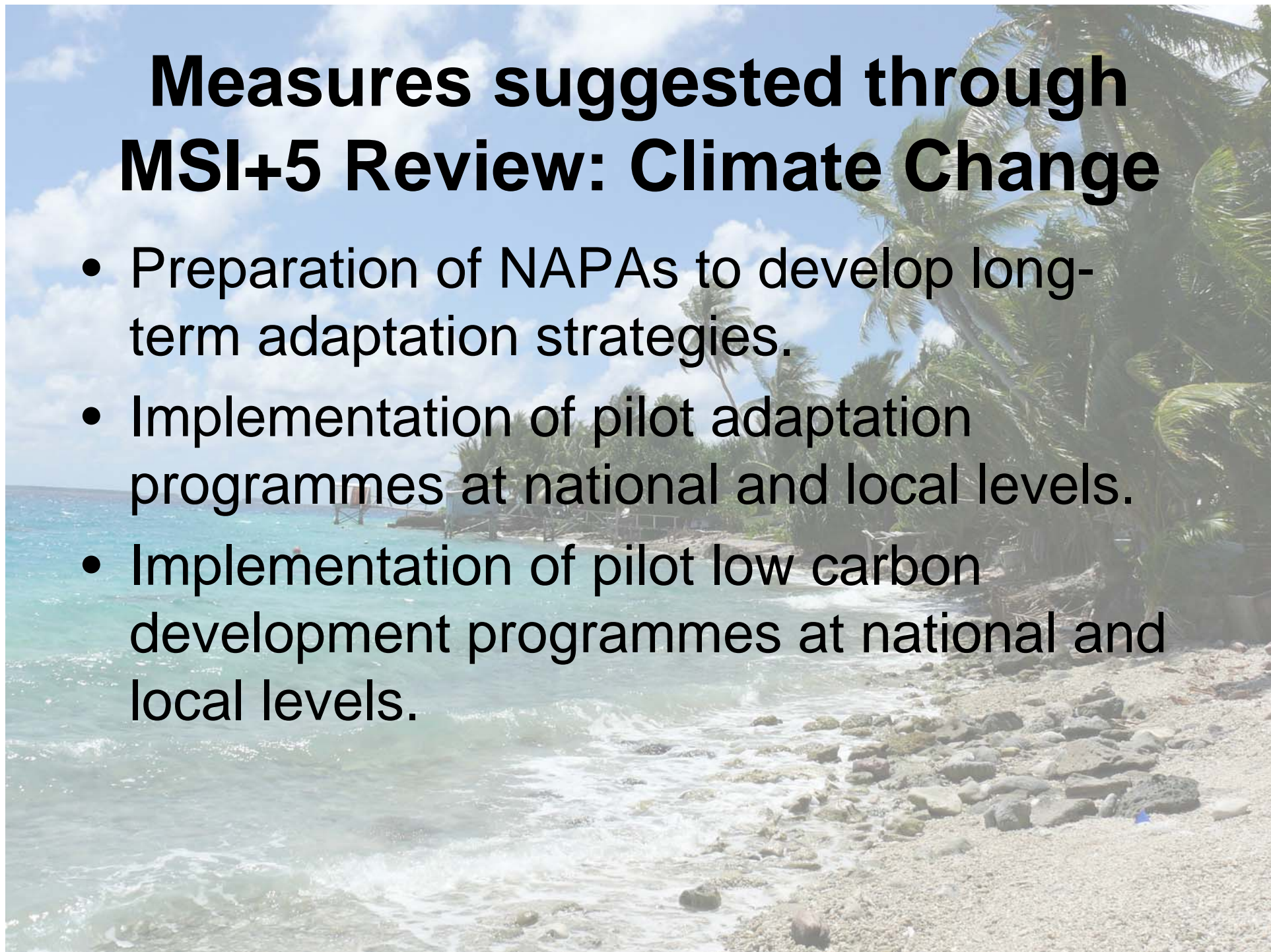
# Five-year review outcome: Climate Change

- Increased frequency and intensity of weather-related events.
- Exposure remains high due to concentration in low-lying coastal areas and insufficient land-use planning
- Spare no sector in SIDS, leaving no safety net after disaster – heavy reliance on donations and foreign loans further exacerbating unsustainable debt levels.
- Resource flow primarily dedicated to post-disaster activities rather than for disaster risk reduction.
- SIDS themselves are taking concrete measures.



# Measures suggested through MSI+5 Review: Climate Change

- Preparation of NAPAs to develop long-term adaptation strategies.
- Implementation of pilot adaptation programmes at national and local levels.
- Implementation of pilot low carbon development programmes at national and local levels.





# The 7 MSI “means of implementation” address intrinsic vulnerabilities of SIDS

Access to and provision of financial resources	Monitoring and evaluation
Science and technology transfer	National and international governance
Capacity development	Role of SIDS regional institutions
Role of the UN	



# **MSI+5 Review: Coastal & Marine Resources**

- Degradation of already narrow coastal zone vulnerable to storm surges and salt water intrusion.
- Creation and implementation of coastal zone management plans
- Marine protected areas
- Sustainable coastal fisheries



The background of the slide is a photograph of a tropical beach. In the foreground, there is a sandy shore with some rocks and a small blue object. The water is clear and turquoise, with gentle waves lapping at the shore. In the background, there is a dense line of palm trees under a bright blue sky with scattered white clouds.

# MSI+5 Review: Waste Management

- Rapid increase in the volume of domestic wastewater and solid waste.
- Unsustainable WM practices
- Some good practices: composting, designer fertilizer and biogasification
- Improved waste-collection coverage
- Limited economic viability of recycling



# MSI+5 Review: Freshwater Resources

- Limited groundwater supplies protected only by thin permeable soil.
- Drought conditions in some SIDS enhanced need for water conservation and desalination measures – Caribbean
- High dependence on surface water-Pacific
- Limited quality/quantity of freshwater due to variable rainfall, high runoff, inadequate storage - AIMS



# MSI+5 Review: Land Resources

- Hightened land resource related vulnerabilities and intense competition
- Land use planning have been hampered by limited enforcement and legal capacities.
- Limited progress in share of terrestrial areas





# MSI+5 Review: Biodiversity

- Vulnerability of SIDS' biodiversity resources.
- Challenges: threat of invasive and alien species, overexploitation, pollution, deforestation, habitat degradation.
- Priority actions needed for building resilience.





# MSI+5 Review: Energy

- Need to decrease fossil fuel dependency.
- Most SIDS adopted strategies for renewable energy
- Renewable-energy options requires significant support measure and subsidies
- Different options for SIDS from others
- Strengthening energy data collection and monitoring crucial




# Ongoing vulnerability assessment work by SIDS Unit of DESA-DSD

- Comprehensive vulnerability-resilience framework
- Vulnerability-resilience country profiling
- SIDSNet being revitalized to serve as platform for information sharing, exchange of good practices and more in the future.

[www.sidsnet.org](http://www.sidsnet.org)





## **MSI+5 High-level meeting during GA-65, 24-25 September**

**Expected outcome:** concise political declaration;  
high-level discussions

**Inputs/follow-up:**

- SG report on the 5-year review based on regional and national assessments
- Trends report on SIDS (publication)
- Launching revitalized SIDSNet
- Strengthening strategic partnership & cooperation
- Integrating SIDS issues in Rio+20 process