Addressing Ocean Acidification in Small Island Developing States (SIDS)

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SIDS are the poorest nations, and the most vulnerable to impacts from climate change.

Threats include:

- sea level rise,
- extreme storm events and droughts,
- coastal erosion and inundation,
- saltwater intrusion into groundwater systems in low-lying atolls,
- coral bleaching,
- ecosystem destruction,
- **ocean acidification**,

SIDS' vulnerability to climate change and sea-level rise is magnified due to their relatively small land masses, population concentrations, and high dependence on coastal ecosystems for food, livelihoods, security and protection against extreme events.

SIDS are highly dependent on natural resources such as coral reefs for livelihood.

Coral reefs are important for subsistence, fisheries, tourism and shoreline protection.

According to Conservation International (2008), the total annual net benefit of the world's coral reefs is $29.8 billion.

- ✓ Tourism and recreation account for $9.6 billion,
- ✓ Coastal protection for $9.0 billion,
- ✓ Fisheries for $5.7 billion, and
- ✓ Biodiversity for $5.5 billion

Of the world's ten countries most dependent on fish and seafood consumption, seven are SIDS.

traveltourxp.com

Continued CO_2 emissions could reduce ocean pH by another 0.5 unit by the end of the 21st century.

Ocean acidification threatens coral reefs and marine biota including fisheries.

Marine calcifiers ability to produce calcium carbonate, and their rate of calcium carbonate production could decrease, while rate of bioerosion and dissolution could increase.

Other calcifying organisms such as components of the phytoplankton and the zooplankton, which are a major food source for fish and other animals may be affected.

Many SIDS have surficial geology made of coralline limestone, acidification may lead to dissolution of the material and increase erosion.

Adaptation to Sea Level Rise and natural hazards (storm surge, hurricanes) is a priority for SIDS, as these impacts are more apparent.

International funded climate change projects for SIDS address monitoring SLR, water security, disaster risk reduction, and ecosystem-based adaptation.

Ocean acidification is only considered with regards to the risk posed to food security and nutrition in the fisheries sector.

Limited capacity exist in SIDS to monitor and/ or research impacts of ocean acidification.

Very little public education and awareness focus on ocean acidification.

Recommendations for Addressing Ocean Acidification in SIDS:

1. Strengthen research capacity, both technological and human capacity through partnerships/ regional networks.

2. Build resilience of coral reefs by removing stressors that can be controlled locally eg. land-based pollution

3. Rehabilitating coastal ' blue carbon' ecosystem such as mangroves, seagrasses and tidal marshes that sequester carbon dioxide.

4. Actively engage / advocate the international community to reduce greenhouse gas emission by meeting international obligations

5. Target support for existing livelihoods, income diversification, re-training

6. Increase public / community awareness on ocean acidification.

THANK YOU

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