



## Climate Impacts Already Felt by Small Islands; Governments Seek Resources to Adapt

(New York, April 2004) – Rising sea levels combined with other extreme climatic events, such as more frequent hurricanes and new patterns of cyclones, are already causing major damage in many small island developing States (SIDS), and the worst seems yet to come.

The International Meeting to Review the Barbados Programme of Action for the Sustainable Development of Small Island Developing States (Mauritius, 30 August - 4 September 2004) is expected to address the impact that climate change and sea-level rise are already having on small islands, and to recommend actions to adapt to these threats and prevent disasters. This includes proposals to reinforce the international community's commitments to curtail greenhouse gas emissions, to strengthen islands' early-warning anti-storm systems and to increase support to islands to adapt to climate change, as stressed at a recent SIDS ministerial forum in the Bahamas.

The beginning of 2004 has brought difficult times, which have provided empirical evidence of impacts that are harbingers of expected effects of climate change. In January, Cyclone Heta slammed the tiny island of Niue (only 260 square kilometres or 104 square miles) with winds of up to 300 kilometres (190 miles) an hour, which devastated it. Inhabitants said that this was the worst cyclone in memory and testified that the storm pounded the island with 50-metre (154-foot) waves that washed inland. The damage to houses and infrastructure was recently estimated to be eight times the island's annual gross domestic product.

In the Indian Ocean, tropical Cyclone Gafilo, the most intense ever observed in this zone by Météo France, violently hit Comoros and Madagascar in March, causing 200 casualties as well as the sinking of a ferry, with more than a hundred crew members and passengers listed as missing. The Northeastern parts of Madagascar were completely flooded.

In February, the nine islands of the low-lying atoll of Tuvalu were submerged by "king tides" with peaks approaching three metres. These tides washed over the lowest points of this country, whose highest point is only 4.5 metres (15 feet) above sea level, affecting freshwater sources and damaging food crops. According to its inhabitants, such king tides, once rare for the islands, now occur practically every two years. The worst flooding happened in 2001, when virtually all the surface of these islands was underwater.

"Pacific Island countries may well be among the first to suffer the adverse impacts of climate change, and the first to be forced to adapt," states a report published in 2003 by the Government of Japan and the South Pacific Regional Environment Programme. The report notes, "Most countries are already experiencing disruptive changes consistent with many of the anticipated consequences of global climate change, including extensive coastal erosion, droughts, coral bleaching, more widespread and frequent occurrence of mosquito-borne diseases, and higher sea levels making some soils too saline for cultivation of traditional crops."

International Meeting to Review the Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States Mauritius, 30 August - 3 September 2004 • www.un.org/smallislands2004 In its 2001 report, the Intergovernmental Panel on Climate Change (IPCC) — a worldwide assessment panel established by the United Nations to which more than 2,000 leading experts contribute — stated that the global average sea level has risen by 10 to 20 cm over the past 100 years. This represents a rate of increase of 1 to 2 mm per year, i.e. some 10 times faster than the rate observed for the previous 3,000 years. It also projected a global average temperature increase of 1.4-5.8°C, and a consequential rise in global mean sea level of 9-88 cm by the year 2100. The IPCC indicated that "an increase in the frequency and magnitude of tropical cyclones would be a major concern for small island States", and "would increase the risk of flooding, accelerate existing rates of beach erosion, and cause displacement of settlements and infrastructure."

Another dangerous precedent occurred in 1999 when Hurricane Lenny became the first in 113 years to extend from west to east across the Caribbean sea. Usually the hurricanes that hit the West Indies start somewhere along the African coast. To protect themselves against these storms, people have always preferred to develop cities and villages on the Caribbean side of the islands, rather than on the Atlantic shores. Lenny caused 17 deaths, which is far less than the more than 10,000 casualties caused in the Central American-Caribbean region by Hurricane Mitch one year earlier. But if west-to-east hurricanes were to recur more frequently, the Caribbean would become even more vulnerable.

Small islands are aware that even if the Kyoto Protocol to the UN Framework Convention on Climate Change (UNFCCC) were fully implemented, the patterns of rising sea levels and extreme weather events would probably continue for some time. That is why they increasingly stress the need for assistance to adapt to climate change. The Climate Change Convention includes the following provision in this regard: "The Parties shall give full consideration to what actions are necessary under the Convention, including actions related to funding, insurance and the transfer of technology, to meet the specific needs and concerns of developing country Parties arising from the adverse effects of climate change and/or the impact of the implementation of response measures," especially on small island countries and countries with low-lying coastal areas.

Tremendous efforts need to be made by small islands to build expensive sea-walls, in situations where that would seem to be the only solution. For instance, the Maldives capital, Male, is partially ringed by a system of protective barriers called tetrapods. While protecting the island from further flooding and from the impact of large waves, the project cost \$4,000 per metre to build, according to a Maldives National Communication to the UNFCCC. Although it was financed largely by the Government of Japan, the project diverted much-needed development aid away from other key socio-economic priorities. Partly due to these financial considerations, SIDS are calling for intensified research into traditional, natural and less intrusive forms of adaptation.

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