



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

(New York, November 2004) – Rising sea levels combined with other extreme climatic events, such as more frequent and powerful 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.

A few months ago, four major hurricanes and tropical storms – Charley, Frances, Ivan and Jeanne – struck the Caribbean islands (and southeastern United States), causing thousands of casualties in Haiti and devastating Grenada. This worst Caribbean hurricane season in living memory, along with other extreme weather events that took place in 2004 in both the Pacific and Indian Oceans, are seen by many as empirical evidence of impacts that are harbingers of the expected effects of climate change.

In its last report, published in 2001, the Intergovernmental Panel on Climate Change (IPCC) – a worldwide assessment panel established by the UN to which more than 2,000 leading scientists contribute – predicted that “peak wind intensity and mean and peak precipitation intensities of tropical cyclones are likely to increase,” which, for small islands, “would increase the risk of flooding, accelerate existing rates of beach erosion, and cause displacement of settlements and infrastructure.”

The IPCC then indicated 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.

In February 2004, 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 that nation, 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 roughly every two years. The worst flooding happened in 2001, when practically all the entire land area of these islands was under water.

The International Meeting for the Ten-Year Review of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States (Mauritius, 10-14 January 2005) is expected to address the impact that climate change and sea-level rise are already having on small islands, and to recommend actions to assist islands in adapting to these threats and prevent disasters. These include 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.

“The social, economic and environmental vulnerabilities of the SIDS could not have been more glaringly demonstrated than through the horrendous destruction wrought by the cyclones and hurricanes in the Caribbean and the Pacific during 2004. The whole world saw the destructive power that nature wields over these small States,” declared recently the Secretary-General of the Mauritius Meeting, Anwarul K. Chowdhury. He added that both the Mauritius International event and the World Conference on Disaster Reduction (18-22 January 2005, Kobe, Japan) need to give high priority to helping these countries build greater resilience and enhanced preparedness in facing the overwhelming frequency of natural disasters.

---

## DISASTERS, ADAPTATION AND THE KYOTO PROTOCOL

The list of recent life-threatening disasters is a long one. In January 2004 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 waves that washed inland. The damage to houses and infrastructure was 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.

“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.”

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 build 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.

The Kyoto Protocol to the UN Framework Convention on Climate Change (UNFCCC) is expected to enter into force soon, following recent ratification by the Russian Federation. But small islands are aware that even if the Protocol is fully implemented, the patterns of rising sea levels and extreme weather events will 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.

### Press Contact:

François Coutu, UN Department of Public Information, Development Section  
Tel.: (212) 963-9495, Fax: (212) 963-1186, E-mail: [mediainfo@un.org](mailto:mediainfo@un.org)  
For more information, please see [www.un.org/smallislands2005](http://www.un.org/smallislands2005)