



MALDIVES

Post-Tsunami Environmental Assessment

United Nations Environment Programme



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Indian Ocean tsunami reaching Male'



at approximately 9:20 a.m. on 26 December 2004, approximately three hours after tremors were felt. Credit: L. Hiller

FOREWORD

by Klaus Töpfer
United Nations Under-Secretary General
Executive Director of the United Nations Environment Programme



Credit: UNEP

In the immediate aftermath of the enormous devastation and suffering caused by the 26 December 2004 Indian Ocean Tsunami, UNEP established the Asian Tsunami Disaster Task Force. At the request of the governments of affected countries, the Task Force has assessed tsunami-related environmental damage, worked to ensure that environment is a part of national recovery agendas, and mobilised environmental recovery assistance.

In February 2005, UNEP issued a rapid environmental assessment of seven of the tsunami-impacted countries (see http://www.unep.org/tsunami/tsunami_rpt.asp). This report, which was developed in close cooperation with the Ministry of Environment & Construction and with the generous support of the UK's Department for International Development and the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), elaborates the findings of the rapid

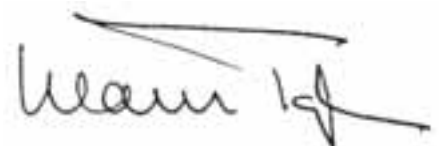
assessment in the Republic of Maldives, based on a detailed expert investigation of the tsunami's environmental impacts.

Maldives, a country of 1,192 islands and 290,000 citizens, is highly dependent on its natural resources. Along with tourism, which provides more than 30 percent of the country's income, fisheries and agriculture are essential to livelihoods on the country's 199 inhabited islands. Although it has not been widely reported in the media, on a per capita basis Maldives was one of the worst affected countries. According to the Asian Development Bank, the tsunami affected services that account for two-thirds of Maldives gross domestic product.

The impact on the country's environment was also profound. Coastal zones were eroded, and the tsunami's waves spread solid waste around the islands. Demolition waste was discovered to contain hazardous materials, including asbestos used in roofing material. Groundwater supplies were badly contaminated with salinity from sea water and faecal coliforms, further compromising an already fragile drinking water supply system. Soils, too, were inundated with seawater, damaging or destroying vegetation and home gardens crucial to island life.

The post-tsunami assessment also brought to light the many urgent environmental problems that existed prior to the tsunami in such areas as waste management, sanitation, protection and recovery of groundwater resources, and coastal zone protection. These chronic challenges were greatly exacerbated by the tsunami. Equally important, the tsunami made evident the urgent need for effective early warning systems, disaster risk management plans and sustainably designed infrastructure.

During the months since the tsunami, the global outpouring of assistance to impacted countries has been truly remarkable. Relief efforts throughout the region have evolved into longer-term reconstruction efforts. In Maldives, the environment is widely recognised as a crucially important reconstruction priority. The country's small but dedicated environmental protection staff has worked hard to address the country's significant needs. UNEP is committed to supporting Maldives during the months and years ahead, as it restores its environmental services and works for a sustainable future for its citizens.

A handwritten signature in black ink, appearing to read 'Uman' followed by a stylized flourish.

INTRODUCTION

Tsunami waves ranging between one and five metres high were reported in all parts of Maldives. The force of the waves caused widespread infrastructure devastation in the islands, 80 percent of which are less than one metre above sea level. One in three of the Maldives' 290,000 residents were affected by the tsunami. Homes were destroyed, livelihoods lost and infrastructure damaged on 69 of 199 inhabited islands, including Fonadhoo, pictured here. According to the Government, 29,577 residents were displaced by the tsunami. Approximately 12,000 remain homeless, living in temporary shelter or with friends and relatives on their own or other islands. Credit: L. Hiller





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