

# The Maldives One year after the Tsunami



Photos courtesy of copyright holders:

Christelle Chappoy, UNDP; Mandy Fitchett, OCHA; Government of the Republic of Maldives;  
Clare Graham, British Red Cross; Yassin Hameed, Portrait Gallery; Giacomo Pirozzi, UNICEF;  
Mohamed Rasheed, UNICEF; Ahmed Shameem, UNICEF; Yoshi Shimizu, IFRC;  
Svend Erik Sørensen, UNEP; Ewald Spitalder, UNEP; Stacey Winston, IFRC

Design by Shane Ricketts  
Printed by Novelty Press

This is a joint publication of the Government of the Republic of Maldives, Asian Development Bank, International Federation of the Red Cross and Red Crescent Societies, United Nations, World Bank, Government of Japan, American Red Cross, Australian Red Cross, British Red Cross, Canadian Red Cross French Red Cross, German Red Cross, OCHA, UNDP, UNEP, UNFPA, UNICEF, WFP, and WHO.

Published by Ministry of Planning and National Development  
Ghaazee Building, 4th Floor  
Ameer Ahmed Magu  
Malé 20-05, Maldives  
First Edition, 2005.

ISBN 99915-55-51-X



## FOREWORD

One year on, the impact of the tsunami is still felt across the country, but the spirit of unity and of communities pulling together in the face of adversity continues to define the recovery efforts in the Maldives. The spirit of cooperation has seen new partnerships forged and existing partnerships strengthened. There is a common commitment to ensure that the Maldives not only recovers from the devastating effects of the tsunami but uses the opportunities presented to make strategic investments in the future and to 'build back better'. These commitments are reflected in the preparation of the Seventh National Development Plan which will encapsulate the tsunami recovery over the next three to five years, as well as lay the foundation for the achievement of the Millennium Development Goals by 2015.

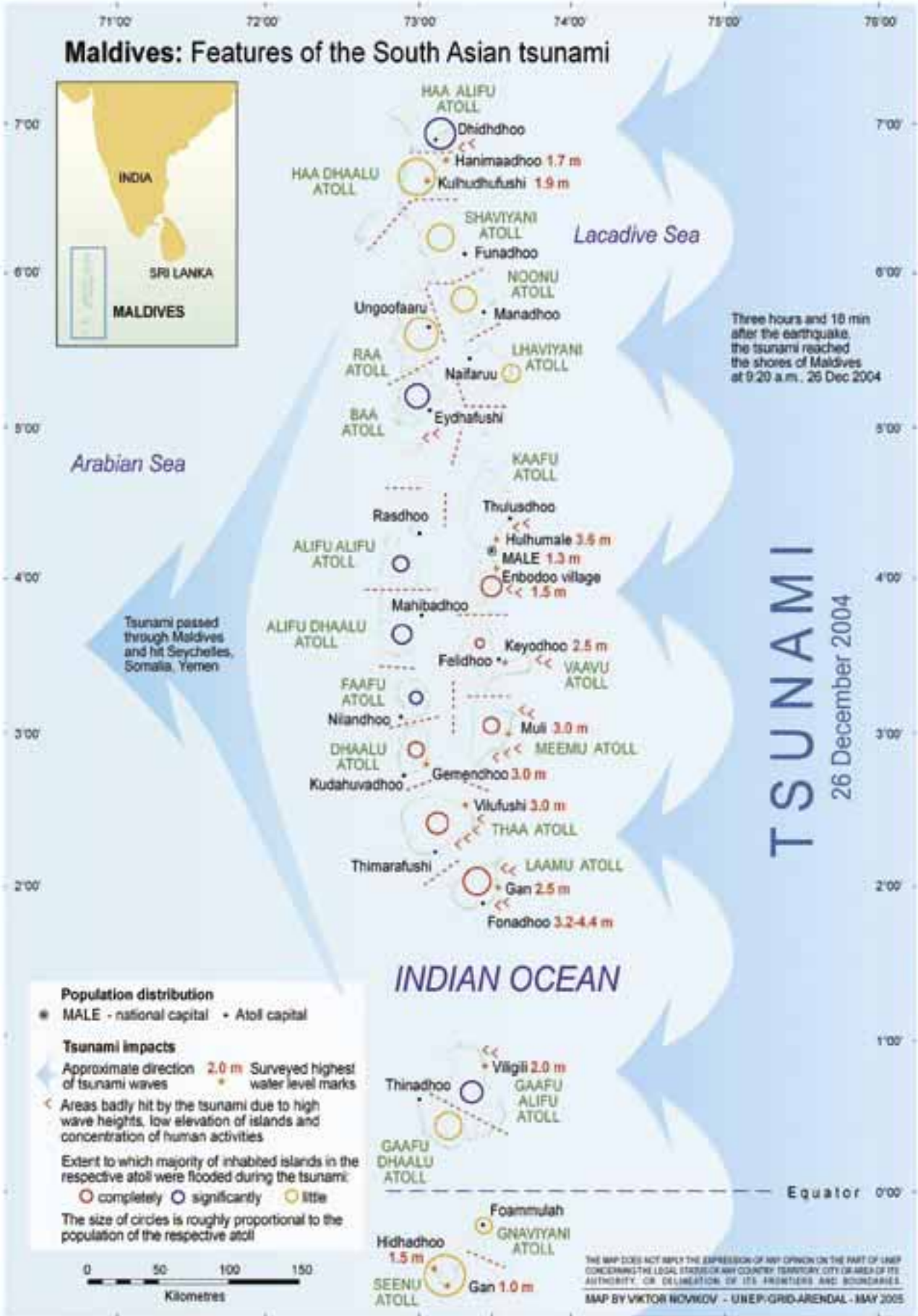
Like the efforts of the past year, this joint report reflects the high levels of cooperation of all those involved in the recovery process. The Government of the Republic of Maldives, the United Nations, the World Bank, the Asian Development Bank, the International Federation of the Red Cross and Red Crescent Societies (IFRC) and members of the Red Cross family, the Government of Japan, national non-governmental organisations and other stakeholders have all come together and made this a genuinely collaborative effort.

Joint working groups provided critical inputs on the main technical sections of the report. An editorial team with representatives from the Ministry of Planning and National Development, the United Nations, the World Bank and the IFRC worked on the overall report. Comments and feedback were received from all line Ministries, external partners and the Office of the President. All the financial data in this report can be found online at <http://dad.finance.gov.mv>. Information relating to the recovery effort can be found at <http://www.tsunamimaldives.mv/>.

This report benefited from the support and valuable guidance received from H.E. President Maumoon Abdul Gayoom, the Chief Coordinator of the National Disaster Management Centre and Minister of Defence, Hon. Mr Ismail Shafeeu, the Minister of Planning and National Development, Hon. Mr Hamdun Hameed, the UN Resident Coordinator, Mr Patrice Coeur-Bizot and Mr Jerry Talbot, Head of Delegation for the IFRC.

The final report represents a shared overview of the main achievements of the past year and the key challenges that lie ahead. In this collaboration, and through the setting of national priorities, the ongoing partnership between the international community and the people of the Maldives will continue to thrive.

# Maldives: Features of the South Asian tsunami



Three hours and 18 min after the earthquake, the tsunami reached the shores of Maldives at 9:20 a.m., 26 Dec 2004

TSUNAMI  
26 December 2004



THE WFP DOES NOT IMPLY THE EXPRESSION OF WFP OPINION ON THE PART OF UNEP CONCERNING THE LEGAL STATUS OF ANY COUNTRY, TERRITORY, CITY OR AREA OF ITS AUTHORITY, OR DELINEATION OF ITS FRONTIERS AND BOUNDARIES.  
MAP BY VIKTOR NOVKOV - UNEP-GRID-ARENDAI - MAY 2005

Sources: Government of Maldives 2005, UNEP Maldives Assessment Team 2005, University of Tokyo 2005, Japan Research Team 2005. Based on best available data as of May 2005.

## EXECUTIVE SUMMARY

The Asian Tsunami of 26 December 2004 caused damage and destruction on a nationwide scale in the Maldives. Over one-third of the population was directly impacted by the tsunami, and some 29,000 people had to leave their homes. The economic damage and losses alone were the equivalent of 62 percent of the country's Gross Domestic Product.

One year on, considerable progress has been made towards easing the hardship and physical devastation that the tsunami inflicted. The vast majority of tourist resorts—the lifeblood of the economy—are once again open for business, homes are being rebuilt and livelihoods restarted. This is due in no small measure to the close cooperation between the Government, development partners and local communities, which has enabled the Maldives to look toward 2006 with renewed hope.

However, much work still lies ahead. The recovery process remains critically under-funded in certain key sectors—notably shelter, power and energy, disaster management, and infrastructure. Despite the outpouring of generosity from the public, generous contributions by donor agencies, numerous governments and international organisations, and extensive lobbying by the Government for financial assistance, the Maldives tsunami recovery programme still requires approximately US\$ 145 million to bridge the funding gap. Of perhaps greater concern is the fact that the Maldives now also faces a budget deficit of around US\$ 94 million for 2005. The Government has begun implementing measures to ensure a quick return to the growth path that led the United Nations to identify the Maldives as a country worthy for graduation to the ranks of middle-income countries.

The other major challenge for 2006 will be to speed up the pace of shelter reconstruction to enable around 11,000 people who remain displaced by the tsunami to return to their homes.

There is much to look forward to, however. The Maldives has embraced the challenge laid down by the UN Secretary General, Kofi Annan, to use the tragedy of the tsunami as an opportunity to invest for the future, and to 'build back better'. This has given new impetus to address long-standing issues relating to the provision of safe water and sanitation, ensuring quality health and educational services for all, the reduction of dependence on oil imports and empowerment of local communities.

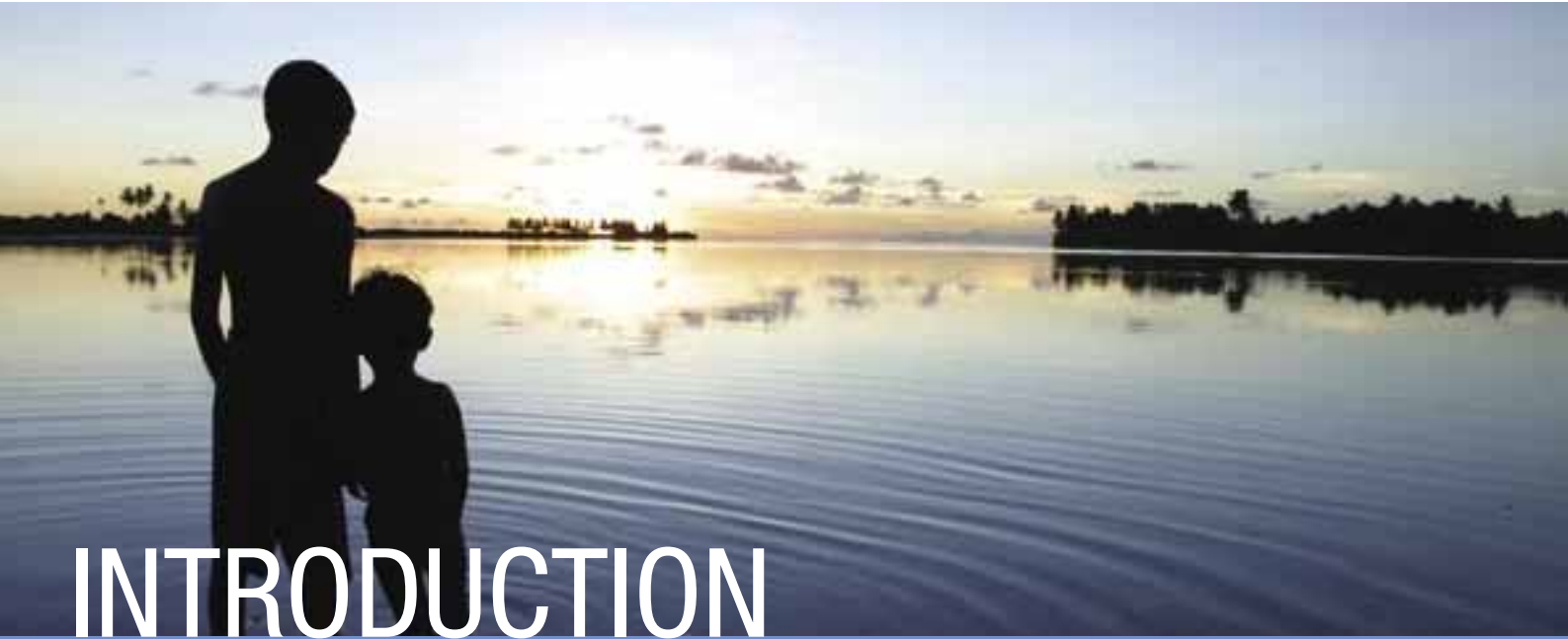
These are investments that will pay dividends over the long term and are an integral part of the recovery process. However, success will be dependant on ensuring that the Maldives is able to secure the funding necessary to underwrite its ambitious rebuilding plans. If that can happen, then this country will have a much better chance of making a full recovery from the effects of the tsunami and to get back on track to achieve the Millennium Development Goals (MDGs), and sustain the impressive economic gains of the last 25 years.





## TABLE OF CONTENTS

<b>INTRODUCTION</b>	<b>6</b>
<b>THE TSUNAMI</b>	<b>8</b>
The first few days	10
Emergency Food Aid	10
Coordinating the Relief Effort	12
Counting the Cost	13
The Response from the International Community	14
Maintaining the Momentum	15
The Macro-Economic Outlook	15
<b>IDPs AND SHELTER</b>	<b>16</b>
Shelter Reconstruction	18
Water and Sanitation	18
<b>QUALITY HEALTH AND EDUCATION</b>	<b>20</b>
Health	21
Dealing with Trauma	21
Protection of Women and Children	22
Education	22
<b>LIVELIHOODS</b>	<b>24</b>
Fishing and Agriculture	25
Getting People Back to Work	26
<b>ENVIRONMENT &amp; DISASTER MANAGEMENT</b>	<b>28</b>
<b>REBUILDING AND UPGRADING INFRASTRUCTURE</b>	<b>32</b>
Energy	33
<b>CHALLENGES FOR 2006</b>	<b>34</b>
<b>BIBLIOGRAPHY</b>	<b>36</b>
<b>ACRONYMS</b>	<b>36</b>



# INTRODUCTION

“In the aftermath of the December 26th tsunami, the spirit of cooperation and unity that we saw across the country was one of its key strengths on the road to recovery and reconstruction. It is these human qualities that will no doubt help the country achieve the MDG targets and beyond.”

MAUMOON ABDUL GAYOOM, PRESIDENT, THE REPUBLIC OF MALDIVES

Millennium Development Goals Maldives Country Report 2005





On the morning of 26 December 2004, the lives and livelihoods of the people of the Maldives were shattered by a wall of water that rushed through the island nation. Triggered by one of the most powerful earthquakes of the last half-century—measuring 9.0 on the Richter scale—the resulting tsunami travelled from its point of origin off the coast of Sumatra, Indonesia, at speeds of up to 800 kilometres per hour. Moving in both an easterly and westerly direction, the tsunami slammed into the coast of Aceh within 30 minutes, Sri Lanka within two hours, and hit the Maldives at 9:23 a.m., approximately three and a half hours after the initial quake. Despite the time lag, the absence of an early warning system meant that the Maldives had little or no warning of the catastrophe that was headed in its direction.

The tsunami left a trail of destruction across 12 countries, stretching from Indonesia all the way to Somalia on the Red Sea. Over the course of that fateful morning, nearly a quarter of a million people died, hundreds of thousands lost their homes, and billions of dollars of damage was caused to property, businesses, and infrastructure.

For the Maldives, the tsunami represented the worst natural disaster in the country's history. Comprised of 1,190 coral islands with an average elevation of 1.8 metres above sea level, and dispersed across 900 kilometres of the Indian Ocean, the Maldives is home to some 290,000 people scattered across 199 islands. All but nine inhabited islands were either partially or wholly flooded, and fully a third of the population was directly affected by the tsunami. Though the loss of life was not as great as in some other affected countries, the relative impact—both on the economy and the population—was much greater than in all of the other tsunami-affected countries. In the case of the Maldives, the tsunami was a nationwide catastrophe.

One year on, much has been done to address the personal hardship and physical devastation that the tsunami inflicted, but a great deal more work lies ahead. While most tourist resorts have reopened, the country as a whole continues to face unique social, economic, and ecological challenges. Critical sectors—notably shelter, power and energy, disaster management, and infrastructure—remain under-funded. Tensions are emerging between internally displaced persons (IDPs) and host communities, human resource and capacity constraints are hindering the pace of implementation, and the macro-economic outlook for 2006 and 2007 continues to give cause for concern. Furthermore, the tsunami has brought long-standing issues to the forefront of national attention, including the need for greater economic diversification, the country's environmental vulnerability, and the inherent difficulties of servicing a broadly dispersed population.

Nonetheless, as the United Nations (UN) Secretary General's Special Envoy for Tsunami Recovery, former US President Bill Clinton has noted, the tragedy of the tsunami also affords a unique opportunity for the affected countries to use the recovery to invest in the future, to rebuild their socio-economic foundation to higher standards and to make qualitative improvements in human development. It remains to be seen how long it will take the country to get back on track to achieve middle-income status but the Maldives has already committed itself to 'building back better'.

This joint report—issued by the Government of the Maldives, the International Federation of the Red Cross and Red Crescent (IFRC), the World Bank and Asian Development Bank (ADB), Japanese International Cooperation System (JICS), the Red Cross Societies of Australia, Canada, France, Germany, United Kingdom, and the United States, national non-governmental organisations (NGOs) and the UN—is one example of the many strong partnerships and close coordination that have defined the recovery process in the Maldives. It is an attempt to take stock of the considerable achievements of the last year as well as to highlight important challenges that lie ahead for 2006 and beyond.

The report focuses on five broad themes: shelter and internally displaced people; universal access to quality health and education opportunities; rehabilitation of livelihoods; the reconstruction of essential infrastructure; and environmental sustainability and disaster management. These have been identified as key national priorities, and form the basis of an ongoing partnership between the international community and the people of the Maldives.

## BEFORE THE TSUNAMI

In the decades preceding the tsunami, the Maldives had achieved considerable socio-economic progress. This was facilitated mostly by huge growth in the tourism industry, and to a lesser extent, fisheries. Under one percent of the population lived on less than a dollar a day. The net enrolment ratio in primary schools was close to 100 percent. Literacy rates were above 98 percent. Maldivian girls outnumbered boys in lower-secondary education—an impressive achievement, particularly for the region. Infant mortality and under-five mortality rates were declining rapidly, as was maternal mortality. The number of people with HIV and AIDS was very low and malaria had been eradicated. Access to safe water was improving. The Maldives was recognised as a strong advocate for global environmental protection and was one of the first signatories to the Kyoto protocol. One week before the disaster, the Maldives was recommended for graduation from the group of Least Developed Countries by the United Nations—though this has subsequently been put on hold due to the impact of the tsunami.



# THE TSUNAMI

“...The first I knew that anything had happened was when I heard a commotion in the streets closer to the sea. There were people walking around with their clothes wet up to their chests. We turned on the TV and they were saying a tsunami had struck the islands. The TV presenter started crying and had to stop reading the report.... I didn't even know what the word 'tsunami' meant. I learnt a new word that day.”

HAWLA DIDI, MALÉ







People reported floors buckling and water flowing out of the ground as the tsunami approached. Unlike other countries, the waves that reached the shores of the Maldives were comparatively small—estimates range from 1 to 4.4 metres—but the effects were felt across the entire nation, rather than a single region. Although the Maldives has long been vulnerable to rising sea levels due to global warming, and individual islands have periodically had to deal with storm surges and localised flooding, the likelihood of a devastating tsunami hitting the country had seemed remote. Consequently, there were no operational plans or capacity to deal with a disaster of this magnitude.

With communication links lost on 182 islands for ten hours or more, it was impossible to immediately gauge the full extent of the devastation. As contact was made with the more remote islands, the enormous havoc inflicted by the waves and flooding slowly became apparent. Eight-two people died and another 26 are still missing and presumed dead. Sea walls were breached on most islands, causing severe flooding. In some cases, islands were temporarily submerged. Fifty-three of the nation's 199 inhabited islands were severely damaged. Flooding also wiped out power plants on many islands and contaminated water supplies; essential infrastructure, such as jetties and harbours that act as the crucial link to the outside world, experienced major damage. The tsunami also destroyed causeways, agricultural equipment, and fishing vessels.





## The first few days

The National Security Service (NSS) immediately launched a series of search and rescue, and logistics missions, and within two to three days the Coast Guard had visited all of the inhabited islands and set up forward coordinating centres for a cluster of atolls. From the first day, an important concern was to re-establish communication with atolls. The Coast Guard, along with local fishermen, and commercial vessels, used high frequency radios to relay information back to the coordination centre in Malé from the most severely affected regions until telecommunications could be re-established. The NSS played a key role in providing early relief, while other militaries in the vicinity generously lent their support and were tasked with a variety of missions.

Several foreign navies arrived in the Maldives to provide assistance, bringing with them much needed food supplies. The Pakistan Armed Forces picked up tourists from the affected resorts and transferred them to unaffected ones or to the international airport. The Bangladesh Armed Forces helped with initial clean-up efforts and with medical evacuations. The French Navy also conducted medical evacuations, and assisted with food distribution, and the repair of generators. The Indian Armed Forces used their helicopters and ships to reach islands with narrow harbours, or where harbours had completely collapsed, to help load and unload equipment.

Much needed water was brought to the islands by US naval ships. Both the IFRC and the British Government made additional landing barges available to assist in delivering relief material, including 32 generators and construction materials, to isolated islands. The National Disaster Management Centre (NDMC) coordinated all foreign military vessels and aircraft to ensure the smooth running of the military assistance during the relief effort. The various militaries stayed for up to two months to help the Maldives get over the initial humanitarian crisis, during which time the NSS also began to help build the first temporary shelters.

Another notable feature of the immediate aftermath of the tsunami was the response of various communities and private sector companies, many of whom independently took in displaced families and distributed essential provisions. Even before any organised relief effort began, concerned citizens took the initiative to collect food, water, and clothing and used their undamaged boats and planes to distribute assistance to those in need. The local radio and TV stations, Voice of Maldives and Television Maldives, made appeals for aid, and local boat and plane companies provided their services at no charge in the effort to reach the affected islands. This prompt action was instrumental in ensuring that communities were able to cope even before government and international relief could reach the geographically dispersed islands.

## Emergency Food Aid

Delivery of food to affected islands was one of the most pressing concerns in the first days following the tsunami. Not surprisingly, the most immediate response to the need came from the people themselves, with residents of Malé and other less affected islands buying food and sending it to other islands at their own initiative. This action was mirrored on a national scale by the Government, which sent rice, sugar, and flour to the affected islands. Over the next days and weeks, emergency food relief arrived from numerous sources and was distributed either at the expense of the donors or through the Government transportation system.

A large part of the food requirements was later covered by the UN, specifically United Nations Children's Fund (UNICEF) and the World Food Programme (WFP). The Ministry of Education and WFP launched an emergency school feeding project for the first term of the school year, targeting 25,000 children on 79 islands. In February, WFP and the Government launched a targeted feeding programme covering some 41,000 people on 91 islands. In addition, the Government continued to provide vegetables, fish, and condiments, and UNICEF provided baby food to 6,800 children under five on the same islands. The joint WFP-Government programme has continued throughout 2005, with the number of targeted people dropping to some 13,000 including IDPs and their host families. This number will reduce further as more IDPs move back into their homes.







## MORE THAN FEEDING EMPTY STOMACHS

When Aishath and her family moved to the island of Buruni in Thaa Atoll a few days after the tsunami flattened her home in Vilifushi, one of their primary concerns was sourcing food. "We received food from many different sources, some people from Malé sent us fresh and tinned food, the Government gave us rice and other commodities and other groups even gave us unusual food from countries we'd never heard of before," said Aishath. Food aid has continued to help Aishath, even after she moved with her family into government-built temporary shelter. Food has also been provided food to vulnerable populations throughout the Maldives. The people of Buruni are now helping themselves by growing some of their own fruit and vegetables. Aishath is particularly proud of the pumpkins she has grown. "Pumpkin has grown very well on our island. So well that we have enough to cover our family's needs and we can also sell some to other families," she beams.





## Coordinating the Relief Effort

The response to the tsunami was swift and well coordinated given the unexpectedness of the disaster. President Maumoon Abdul Gayoom played a crucial role in expediting relief operations immediately after the tsunami. An emergency meeting, chaired by the President, was convened just after the tsunami hit the country and a special Ministerial Committee and Taskforce was constituted the same day to oversee initial relief operations. Working initially out of the Iskandhar School, in the capital, Malé, government officials coordinated the collection and distribution of relief, provided basic counselling to the first victims, and began a preliminary damage assessment.

Recognising the desperate need of the people, many of whose life savings had been washed away in the flood waters, a one-off cash compensation was given to every affected individual soon after the tsunami.<sup>1</sup> An estimated 60,000 beneficiaries received payments through the first quarter of 2005.

By the end of the first week, the Government had set up the NDMC to coordinate continuing relief efforts. The Minister of Defence was appointed Chief Coordinator of the NDMC and took control of operations. Ministers and government staff were co-opted from their posts to take on emergency roles, and from the first day were overseeing the relief efforts. The Centre evolved out of informal arrangements that were put in place by the NSS in the first days following the disaster. This enabled the Maldives to avoid many of the coordination pitfalls faced in other countries.

The creation of the Managing Internally Displaced Persons (MIDP) Unit to address the needs of IDPs was one of the Government's many innovative actions during the humanitarian crisis in a country that had little prior experience of dealing with a disaster of this scale. Two other important units created within the NDMC were the National Economic Recovery Unit (NERU), under the Ministry of Finance and Treasury (MOFT), and the Housing and Infrastructure Redevelopment Unit (HIRU), coordinated by the Ministry of Planning and National Development (Figure 1).

Schools reopened two weeks after the scheduled start of the school year—where necessary, in temporary structures—which provided a semblance of normality to the lives of many of the youngest victims. Construction of the first group of transitional and permanent houses and implementation of the island revitalisation programme started exactly one month after the disaster.

<sup>1</sup> Ranging from Rf. 500 (US\$ 40) for those least affected and between Rf. 1000 and Rf. 1500 (US\$ 80–120) for IDPs.

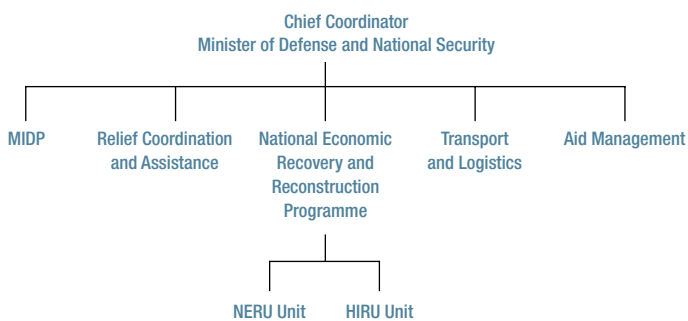


Figure 1: Structure of the National Disaster Management Centre





Thanks to excellent coordination among the Government, UN agencies, the IFRC, international non-governmental agencies (INGOs), other bilateral partners, and national NGOs, the emergency relief phase was effectively concluded by the end of January. This enabled the Government and international partners to concentrate on the important challenge of early-to-medium term recovery.

### Counting the Cost

The Joint Needs Assessment—carried out by the Government of the Maldives working in close partnership with the World Bank, ADB, and UN agencies in early February—provided a stark picture of the total assets lost as a result of the tsunami.

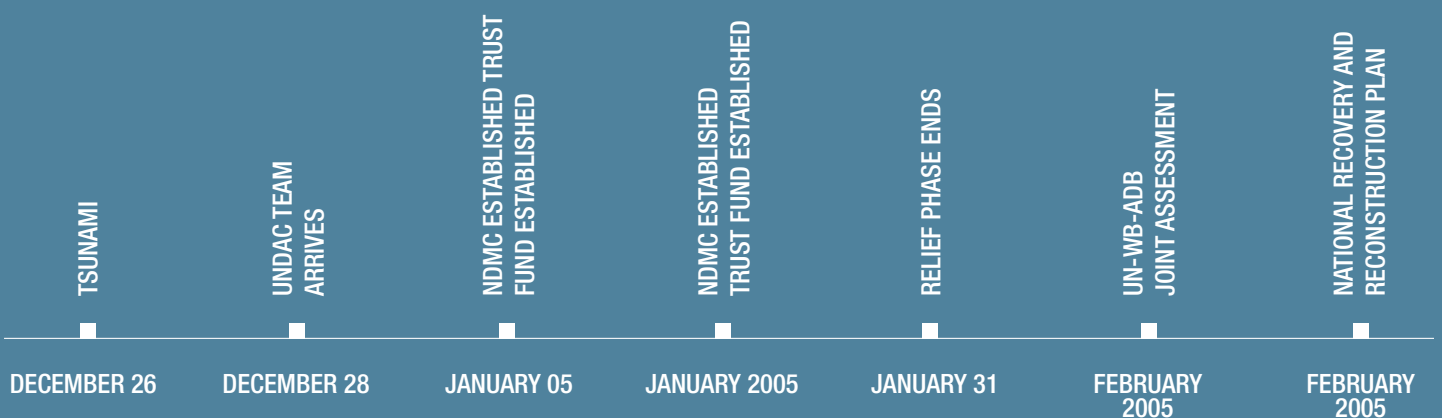
In all, the tsunami affected a third of the population through loss of homes, livelihoods, and essential infrastructure. Around 8,000 homes were damaged or destroyed. Upwards of 29,000 people (10 percent of the total population) were initially displaced, and just over 11,000 people still remain in transitional shelter, living with relatives or host families or in their damaged houses, awaiting repair.

Total losses were initially estimated at US\$ 470 million, or the equivalent of 62 percent of the gross domestic product (GDP). However, it should be noted that this figure did not include the full costs of environmental damage, losses of private assets, income, and livelihoods, and other indirect costs which, when taken into account, would significantly increase the overall figure. The Government has estimated that the cost of infrastructure reconstruction alone over the next three years will be around US\$ 390 million.

Using the Needs Assessment as a base the Government developed the National Reconstruction and Recovery Plan (NRRP), which was released in March and outlined 95 projects across 14 different sectors to cover the replacement of these assets. The Government has also launched the Tsunami Recovery Trust Fund under the Auditor General with an independent board to provide transparency and accountability in the use of relief funds.

As a further demonstration of its determination to ensure the highest level of fiscal probity, the MOFT launched the Development Assistance Database (DAD), which provides instant public access to information on the tsunami recovery efforts in the Maldives. The database displays a wide range of information on project design, locations, sectors, outputs, activities, financial commitments, disbursements, and expenditures. The development of the DAD has been an important step in the recovery phase, promoting greater transparency and accountability to donors and beneficiaries alike.

Figure 2: Timeline of the Early Recovery



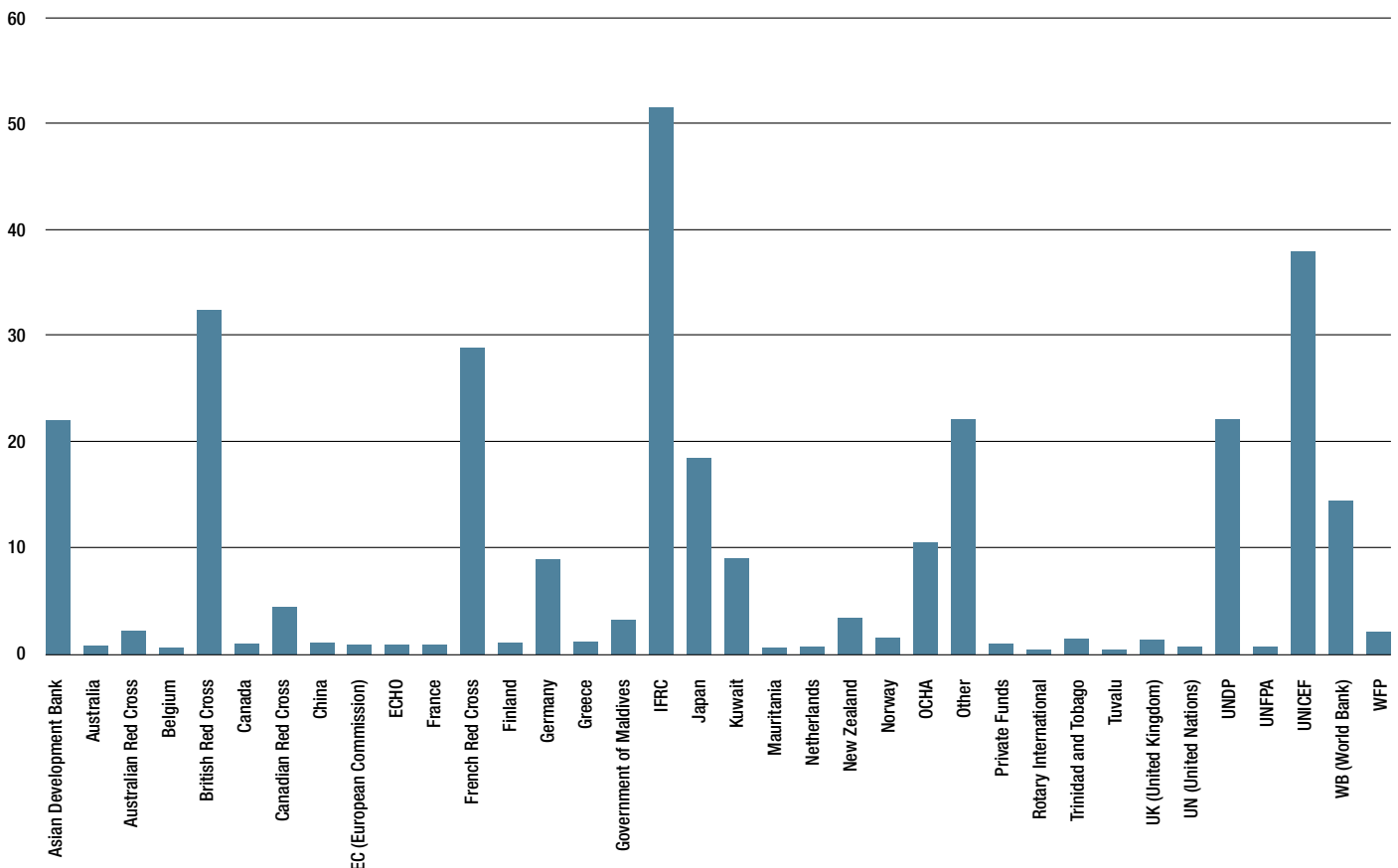
## The Response from the International Community

The response of the international community was similarly rapid. Cash and in-kind contributions flooded in from all over the world, including the United States, Japan, the European Union, the Republic of Korea, India, Turkey, Libya, Morocco, the Republic of Trinidad and Tobago, and Bhutan (Figure 3). The IFRC and Red Cross Red Crescent Societies between them have contributed approximately US\$ 120 million to the recovery effort and are the largest donors in the Maldives. The UN Flash Appeal—launched in February 2005—mobilised around US\$ 80 million, of which US\$ 16 million went to immediate relief efforts. The remaining funds have been channelled into recovery efforts.

The Maldives engagement with donors was kick-started by President Gayoom at the Special Association of South East Asian Nations Leaders' Meeting in the Aftermath of the Earthquake and Tsunami in Indonesia in January 2005, where he brought the world's attention to the devastating impact of the tsunami on the Maldives. Since then he has addressed these issues in a number of international meetings including the South Asian Association for Regional Cooperation Summit, Commonwealth Summit and the Organisation of Islamic Conference Summit. Visits to the Maldives in February and again in May 2005 by the former US President and UN Secretary General's Special Envoy for Tsunami Recovery, President Bill Clinton, have also bolstered the Maldives recovery and rehabilitation process by playing a key role in raising international awareness of the plight of the nation following the tsunami. President Bill Clinton has been a valuable friend of the Maldives at this time of great need.



Figure 3: Commitment by Donor (US\$ Millions)



## Maintaining the Momentum

A key concern in the Maldives' relief and recovery effort has been to maintain the world's focus on the country. The NRRP has been updated and the current cost of the recovery is estimated at US\$ 393 million (this excludes US\$ 100 million in damages to the tourist resorts, the bulk of which was covered by private insurance). One year on—and despite over-commitments in the health, water and sanitation and education sectors—the recovery effort remains under-funded by around US\$145 million (Figure 4) and the Government continues to seek external assistance to cover this shortfall. Additional funding, mainly in the form of loans are expected to be agreed upon in early 2006, but are yet to be finalized and have therefore not been made included in the calculations. There continues to be a funding shortfall in a number of key sectors namely transport, housing and power and energy (Figure 5).

## The Macro-Economic Outlook

The tsunami forced 21 of the 87 tourist resorts to close temporarily, while six were severely damaged and had to be totally rebuilt. The effect on tourist numbers was dramatic. As soon as the airport re-opened, most of the tourists who had been stranded in the wake of the tsunami left early. Despite initial fears that the tourism sector would take several years to recover, 12 months on there is cause for cautious optimism. While tourist arrivals for the first six months of the year were approximately 50 percent lower compared to 2004, the overall decline is likely to be much closer to 30 percent, with the monthly total for December only showing a moderate decline compared to last year. Bookings for the Christmas and New Year holidays are said to be very encouraging.

All told, it is estimated that the Government lost approximately US\$ 40 million in revenues over the course of 2005 due to the damage to the resorts and the sharp decline in tourist arrivals, particularly during the first half of the year. The loss in revenue coupled with additional government spending resulted in an overall budget shortfall of around US\$ 94 million, the impact of which only really became apparent in the second half of the year. When combined with the gap in the reconstruction budget, the fiscal imbalance is a cause for concern. The tsunami's direct impact on the economy, as well as the cost of recovery and reconstruction, has seen the current account deficit double from 12 percent of GDP pre-tsunami to 25 percent for 2005. As a result, as it prepares its budget for 2006, the Government is pursuing measures to cut expenses and raise revenues.

The World Bank, International Monetary Fund, and ADB have recommended a number of options for reducing the budget deficit in 2006 that would balance the needs of the private sector to accelerate growth whilst helping the poor with earmarked resources. These include containing total spending in 2006, implementing pension reforms, maintaining the fuel surcharge on both electricity and water to reflect oil price movements, and continuing to defer any non-tsunami capital expenditure plans that are not critical for infrastructure and social needs.

While considerable attention is still being devoted to identifying potential savings in public expenditures, the Government continues to attempt to mobilise resources for both the recovery effort and to plug the hole in the budget deficit through appeals to the international community. It will be important to ensure that the anticipated austerity programmes should be targeted so as not to affect the victims of the tsunami. The delineation between tsunami and non-tsunami government expenditure is an inexact science, however, and it remains to be seen to what extent the Government and its partners are able to cushion the general population from the impact of these economic shocks.

Figure 4: Overall Funding Gap (US\$ Millions)

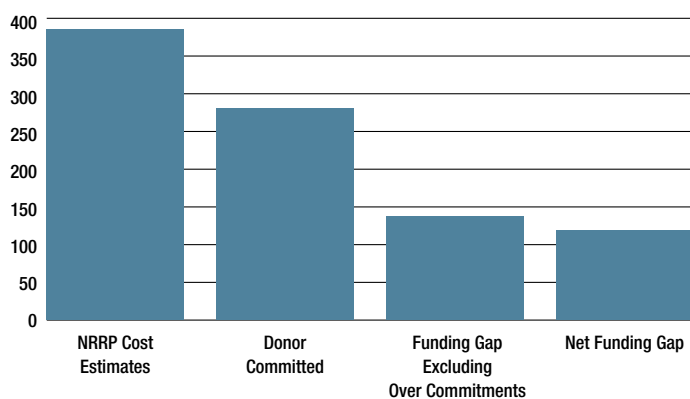
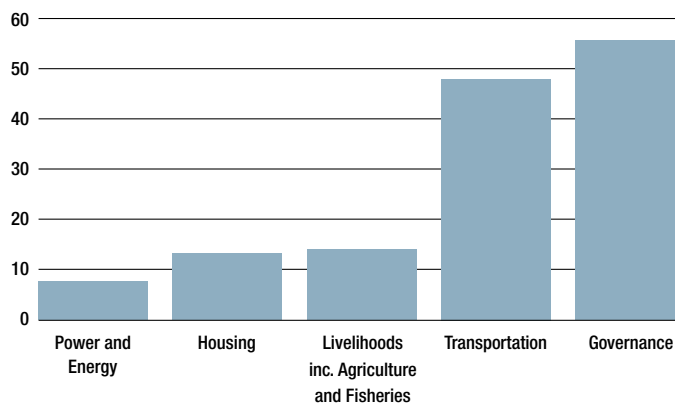
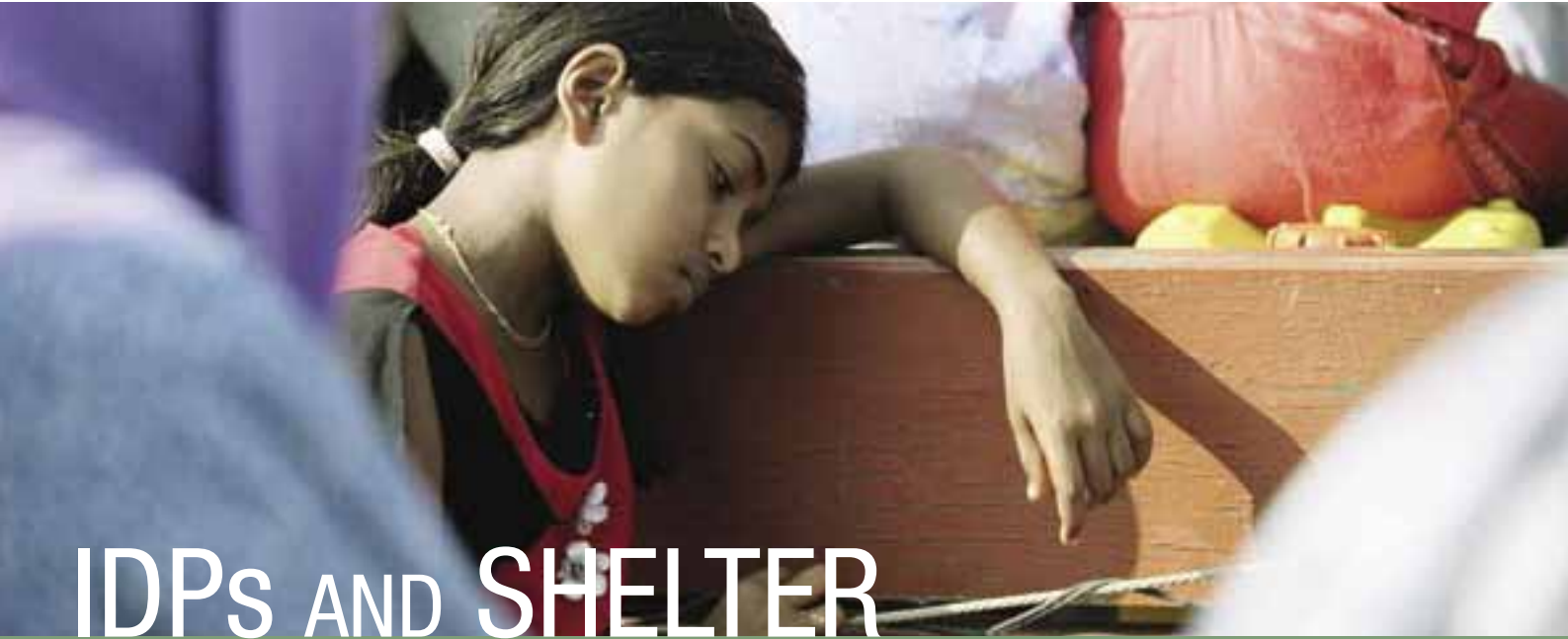


Figure 5: Critically Under-Funded Sectors (US\$ Millions)







# IDPs AND SHELTER

“...People can’t wait to get into their new homes. You can see the discomfort on their faces. The standard of living has gone down since the tsunami. People who lost their homes are sick of living in overcrowded places with friends and relatives, but everyone is grateful that they had someone on the island to help. Many people on other islands weren’t so lucky....”

ABDULA MUFEED, ISLAND CHIEF, DHIGGARU ISLAND, MEEMU ATOLL





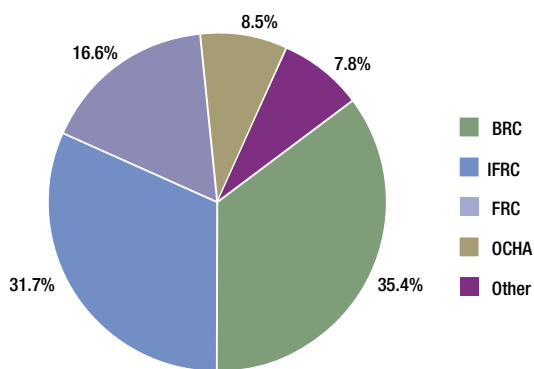


Figure 6: Financial contributions to shelter reconstruction

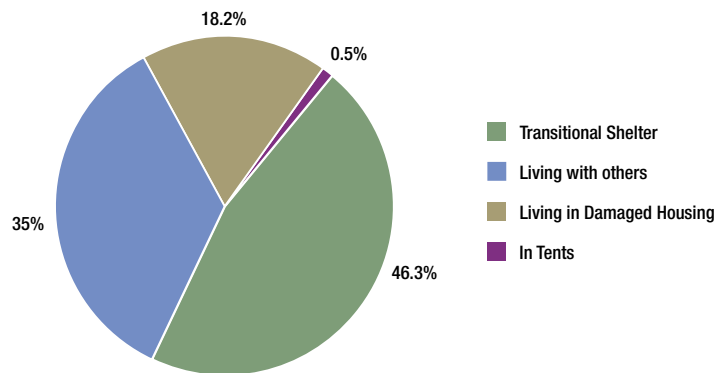


Figure 7: Distribution of Internally Displaced Persons by Shelter as of 1 November 2005

One of the greatest challenges that the Maldives has faced in the aftermath of the tsunami has been that of IDPs—people displaced from their homes and living in temporary shelters or with host families.

Prior to the tsunami, each island retained a distinct character that reflected generations of communal living. But when the tsunami struck, thousands of people fled their homes. In places such as Kandolhudhoo in Raa Atoll, for example, where the entire island was destroyed, the majority of the population was transported to five other islands where they were welcomed and provided with food, water, and shelter. IDPs are spread across 18 atolls, but 68 percent are concentrated in four atolls: Raa (28 percent); Laamu (15 percent); Thaa (14 percent); and Meemu (11 percent). Fifty-eight percent of IDPs are displaced on islands other than their own, and 42 percent are displaced on their own island.

For a country with no previous experience of dealing with IDPs, the Maldives responded extremely quickly to ensure that all displaced communities were provided with safe shelter and that problems with over-crowding in host families were addressed. With funding from the IFRC and advice from the Internal Displacement Division of the Office for the Coordination of Humanitarian Affairs (OCHA), the Government rapidly set up temporary housing that met SPHERE standards—a set of internationally recognised standards for emergency settlements. Today, approximately 50 percent of IDPs are living in temporary family units (for up to 11 people) made of plywood, and zinc roofing. Each unit has electricity and consists of two bedrooms, a bathroom with flush toilet and shower, and a kitchen area with a gas stove.

The transitional shelter programme is one of the finest examples of cooperation between the Government and the international community during the first six months following the tsunami. With funding from the IFRC, 725 apartments have been built, considerably easing the burden on host families. In addition, many seasoned aid workers have noted that these are among the best examples of temporary shelters anywhere in the world.

In many respects, the housing and care for IDPs remains one of the big successes of the relief and early recovery period. However, it also remains the key challenge facing the Government and aid community. The main priority for IDPs is to move into their own homes. What ultimately becomes of these people will be influenced by difficult decisions that need to be taken regarding population consolidation.<sup>2</sup>

The major challenge moving forward will be to deal with the tensions between host communities and IDPs that are beginning to surface. Originally, island offices were mandated to manage the needs of the IDP populations (which sometimes, as is the case with Thaa Buruni, actually dwarfed the host population) without any special training. In some cases, however, this has led to a failure to report incidents, insufficient attention being given to the special needs of both communities, and lack of understanding and cultural sensitivity. These issues are now being addressed with the development of camp managers on islands with significant IDP populations.

There are many contributing factors to the tensions in the host and IDP communities, including the frustration of living in temporary shelters without sufficient information as to when permanent housing will be available (which may not be until 2007). The delays in shelter reconstruction are in part due to the adoption of participatory planning processes which have required several rounds of consultations with the affected communities before plans are finalised. These delays have meant that the priorities of IDP communities extend beyond basic needs, to social and economic mobilisation activities. Livelihoods programmes are being implemented, and programmes that address the social needs of IDPs and their hosts need to be developed.

The Government is also cognizant of these issues, and ministries have been instructed to implement urgent measures to reduce tensions by addressing community concerns. The Government has emphasized the need to protect the rights of both IDPs and host populations in recovery and reconstruction and to involve the community in the decision-making processes in the recovery programmes. The Government also places great emphasis on confidence building measures and on promoting measures to enhance unity within the community through social integration. High-level government officials, including Special Envoys of the President, have visited the most severely affected people on a number of islands to enquire about their well being. IDPs were able to present their concerns and needs to these officials. Special consideration was given to make necessary provisions to IDPs prior to Ramazan.

The humanitarian response to the IDP situation has been timely, generous, and effective. Government ministries, UN agencies, NGOs, and the Red Cross and Red Crescent Movement have worked closely together with the MIDP Unit within the Government to ensure that IDPs have been provided with all their basic needs. In addition to temporary shelters, additional classrooms have been built, food and hygiene kits have been provided, and psychosocial counsellors have been enlisted to help communities deal with the trauma of their experiences.

<sup>2</sup> This is the Government's policy of trying to group a scattered population onto 20 islands, which would be upgraded to "safer islands" by raising the height of the land, building sea walls, and providing such essential services as hospitals and secondary schools.



In the face of such an overwhelming agenda, the Government and major donors have divided the responsibility for reconstruction among them, with the IFRC building the largest number of houses and consequently committing the largest amount of funds of any donor. As of November 2005, 805 houses have been repaired, and another 1,300 are ongoing. Work on the construction of 509 houses has commenced and over 600 houses are at tendering stage. Micro-credit grant agreements worth over US\$ 4 million have been signed with 44 Island Development Committees. Funds under these agreements will allow 1,183 householders to pay for the repair of their houses and another 135 to rebuild their destroyed homes. In some instances people have moved back to their damaged homes to oversee repairs using community grants from the Government and/or United Nations Development Programme (UNDP) underwritten by the Government of Japan.

## Water and Sanitation

For engineers involved in the construction of houses and islands, clean water and sanitation, which were severely affected by the tsunami, have to be taken into account during the reconstruction and repair process. With the exception of Malé, no island is connected to a sewerage system. Toilets consist of soak-pit septic tanks, though some discharge human waste through the highly porous soil directly into the ground water. At the time of the tsunami, many of the septic tanks were poorly maintained and were cracked and leaking.

When the tsunami struck, sea water entered the shallow wells and groundwater supplies, and human waste from damaged or destroyed septic tanks and pit toilets leaked into water supply systems. To overcome the immediate problem of contaminated water, bottled water was provided in the early stages of the emergency. In the first two months more than 25 reverse-osmosis desalination plants were donated by IFRC, UNICEF, OXFAM, and the governments of Singapore and Germany; five were mounted on boats to distribute water to remote communities. With rainwater being the primary source of drinking water, considerable focus has been placed on the provision of domestic water tanks, guttering and down pipes by the IFRC and UNICEF.

To avoid such problems in the future, reconstruction plans include the provision of clean water supplies, including rainwater harvesting tanks, appropriate septic systems, efficient effluent disposal, and the proper disposal of household waste and tsunami debris.

It has become clear that the post-tsunami reconstruction effort far exceeds the resources available in the country; technical and managerial capacity—engineers, managers, foremen—are in very high demand, and community development expertise and support is rare. In the meantime, community awareness programmes dealing with water conservation, pollution, and hygiene practices are being implemented, and water and sanitation technicians are being trained to provide more local capacity in the area.

To empower IDPs and their hosts to take greater responsibility in managing their own affairs, and to reduce their dependency on the work of Malé-based organisations, the MIDP Unit and OCHA have worked with communities to set up IDP Committees on most of the affected islands. These committees have greatly improved local involvement in the recovery process, and have helped to avoid conflict that might otherwise have arisen within the communities. There were disturbances on one island in early November which emphasized the need to invest more in psychosocial programmes in addition to the current primary focus on reconstruction. Despite all the progress to date, ‘building back better’ has taken far longer than was initially thought.

## Shelter Reconstruction

In some ways, the initial relief phase following the catastrophe was the easiest part of the process. As disaster relief moved onto recovery and reconstruction, the true dimensions of the challenge began to emerge. Among the many tasks to be addressed, a total of 5,215 houses needed to be repaired and another 2,879 needed to be reconstructed.

Though not on the same scale as in other tsunami-affected countries, the unique logistical challenges of the Maldives has made shelter reconstruction a daunting and complex problem. Indeed, the simple transportation of building materials to the islands is a major issue in itself. On some islands, harbours have silted up as a result of the tsunami, and jetties have been damaged or destroyed. The price of marine diesel fuel has increased to the point where a single boat trip can cost thousands of dollars. Airlifting is not always an option as some islands are just too small and lack appropriate landing areas.

To further compound matters, engineers discovered that the number of houses requiring repair was actually increasing over time. As the islands’ highly porous soils subsided in the months following the tsunami, the ground shifted and previously unharmed buildings required repair or demolition. Consequently, initial assessments sometimes proved inaccurate, and additional people became entitled to assistance. In addition, a number of islands are being completely rebuilt—literally—from the ground up, with overall elevation being raised several metres, a significant feat of engineering. For example, IFRC is undertaking one such construction project which will involve developing an uninhabited island for up to 3,600 tsunami-displaced Maldivians. This will be an environmental ‘green’ community infrastructure, including houses, schools, community centre, sports facility, administration complex and a guest house. IFRC will provide roads, water supply and distribution, sewerage, and waste management.



## LOOKING INTO THE FUTURE COMMUNITY CONSULTATION

The British Red Cross (BRC) conducts tours of model homes for islanders who have lost their houses, so they have an opportunity to influence the design of their future homes. “People were really excited and engaged. It gives us all a kick. The fact that they can select colours and layout certainly builds on participation”, said a spokesperson for the BRC after one of the tours. Families have a choice of three layouts and three colours for the roof, walls, and tiles. The model homes tour is just one example of how the BRC’s Maldives Recovery Programme ensures that target communities are able to shape the decisions that affect their lives. Over the next two years, the organisation will spend approximately US\$ 27 million reconstructing over 700 homes and restoring livelihoods on tsunami-affected islands, as well as supporting communities so they are better prepared for future disasters. Part of this disaster risk management includes ensuring that the new houses built are designed to be as tsunami resilient as possible.





# QUALITY HEALTH AND EDUCATION

“Thankfully my family and I were not physically hurt when the waves came. However, the psychological wounds were deep and for months none of the kids could sleep properly, always in fear that that terrible day might repeat itself. Being able to go to school so quickly was a blessing though, and the work of counsellors sent from Malé have really helped them to come to terms with what happened and ease away their worries.”

IBRAHIM, HULHUDHUFFAARU, RAA ATOLL





Prior to the tsunami, the Maldives was considered to be well on the way to achieving the eight Millennium Development Goals (MDGs)<sup>3</sup> set out by the United Nations and ensuring that the economic prosperity of the past three decades was matched by an equally impressive improvement in human development indicators. There were serious concerns that the damage caused to schools and health centres across the country and a significant IDP population would have a negative impact on key social indicators and the ability of the Maldives to achieve the MDGs. However, with the exception of certain pockets of poverty and a long-standing problem with child malnutrition, it appears that the Maldives will be able to meet the targets and goals laid out in the Millennium Declaration.

From the onset, the Ministries of Health, Education, and Gender and Family together with the Red Cross Red Crescent Movement and their partners in the UN system—UNICEF, United Nations Population Fund (UNFPA), and the World Health Organisation (WHO)—approached the tsunami as an opportunity to make a sustained and meaningful investment in quality services in the key social sectors. In fact, the health and education requirements outlined in the NRRP were over-funded, which provided a unique opportunity to make significant investment for the long term.

## Health

Although physical injuries were relatively few, the tsunami did inflict considerable damage on health infrastructure. One regional hospital, two atoll hospitals, 19 health centres, and 21 health posts were damaged or destroyed. There was also a massive loss of medical equipment, consumables, and other hospital materials. All in all, the capital loss to the health sector is estimated at around US\$ 12 million. Despite these losses, rapid replacement of lost equipment and supplies, supported by UNICEF, and immediate resumption of vaccination rounds kept immunisation coverage rates high, and the Maldives was spared any major disease outbreak following the tsunami. German Red Cross are supporting the Government in repairing health facilities and providing medical equipment and supplies at the cost of US\$ 7.5 million.

Capacity building, both for institutions and human resources, has been a key issue for WHO and other agencies in their collaboration with the Ministry of Health. Focus areas have included reproductive health, mental health, health care waste management, medical supply systems, laboratory services, health promotion, child growth monitoring, emergency preparedness, and communicable disease epidemiology and surveillance. Human resources have been developed through national training programmes and workshops and by sending health staff for training within South-East Asia.

## Dealing with Trauma

The one major post-tsunami health issue that has arisen, affecting both adults and children, is psychological trauma. Initially, the most common psychological effects included intense fear of another tsunami, anxiety and depression, inability to sleep, loss of appetite, fear of the ocean, and an inability to concentrate. In addition, many people continue to experience distress from congested living conditions and lack of available information regarding their future. Tensions have arisen between host and IDP communities for a variety of reasons, and this has added to the stress experienced by these communities.

A number of initiatives have been taken to tackle the nation's various psychosocial issues. In the immediate aftermath of the Tsunami a unit called the 'Social Support and Counselling Services' was created within the NDMC with counsellors and volunteers who coordinated psychosocial support activities in the affected islands. Work focussed on two major areas. First, sending counsellors to the worst affected islands to provide direct psychosocial intervention, and carry out workshops to generate local community volunteers for continuation of psychosocial support activities (known as 'emotional support brigades'). The second arm was training teachers in schools all over the country to provide psychosocial support to pupils. The American Red Cross (AmRC) provided Psychological First Aid training and materials to 70 counsellors involved in the psychosocial intervention work. Through this programme, 22,500 people have been provided with social support and counselling services. Training has also been provided to 321 teachers in 20 atolls covering 226 schools and 6 master trainers in Malé. UNFPA and UNICEF provided logistical support to these projects.

The Ministry of Health has been working closely with WHO and UNFPA to increase the capacity of island health workers and communities to deal with these issues. On five atolls, health care providers have been trained in psychosocial and mental health issues; and local 'community educators' have been given the skills to provide support to these communities as well. The Ministry of Gender and Family is establishing safe-play areas as a psychosocial support intervention for children on tsunami-affected islands. A programme by Care Society—one of the largest national NGOs—will be run with the involvement of members of tsunami-affected households will soon be providing psychosocial care to affected communities in four atolls. The AmRC will be implementing a three-year psychosocial support programme in six atolls, and capacity building at national level. UNFPA has briefed health care providers at the Indira Gandhi Memorial Hospital on the early identification and management of psychosocial issues. Senior government staff, the media, NGOs, and donor agencies have all been provided with training on IDP issues. With a need for reliable baseline data, UNFPA was instrumental in ensuring a module on reproductive health and psychosocial issues is included in the Tsunami Impact Assessment Survey currently being conducted by the Government.

<sup>3</sup> The United Nations Millennium Declaration sets out eight goals which signatory countries are required to meet by 2015. These goals are: (1) eradication of extreme poverty and hunger; (2) universal primary education; (3) promotion of gender equality and empowerment of women; (4) reduction of child mortality; (5) improved maternal health; (6) combating of HIV/AIDS, malaria and other diseases; (7) environmental sustainability; and (8) develop a global partnership for development.





## Protection of Women and Children

Both the scope and resources for addressing women and children's rights and protection issues have increased considerably as a result of the tsunami. There is currently a window of opportunity to implement important new programmes on a large scale, engaging a wide range of stakeholders. The various actors in women and child protection, including the Ministry of Gender and Family, and UNICEF, will continue to address the increased vulnerability of women, children and adolescents following the tsunami through the establishment of a decentralised family protection system, and will emphasise the overall protection of women, children and adolescents. UNFPA has been working to create awareness of gender-based violence, establishment of the Family Protection Unit within the Indira Gandhi Memorial Hospital in Malé, sensitisation of health providers to identify cases of gender-based violence and child abuse.

According to the MIDP Unit, no children were separated or orphaned by the tsunami. While other tsunami-affected areas have reported incidences of child sexual exploitation and trafficking, there have been no official reports in the Maldives. However, there are concerns that due to the crowded situation in temporary shelters and the added demands on parents, children may be at risk of being abused, exploited, or neglected. Following the tsunami, emphasis has been placed on creating an environment that supports the psychosocial well being of all children and adolescents, but most particularly those directly affected by the disaster.

## Education

Of the nation's 315 schools at least 116 were affected in various ways by the disaster, with eight schools requiring complete reconstruction, 11 major repairs and 71 only minor repairs. Recovery of the education infrastructure has been estimated at US\$ 21.1 million. In addition to the physical damage, schools in Malé have had to cope with increased crowding as a result of the post-tsunami immigration to the capital. Similarly, 14 percent of the unaffected schools in the atolls have also required provision for displaced students. Vast quantities of school supplies and equipment as well as school records and teaching and learning materials were either damaged or swept away. Almost 30 percent of students lost books, school uniforms, and other supplies that families could not replace.

Replacement of educational materials was seen as an immediate priority, along with the repair and rehabilitation of damaged facilities and the construction of temporary/additional classrooms in host islands. So too was the provision of technical support to untrained teachers. The initial rapid assessment of damage and needs helped to identify priority areas for support in the education sector.

- One hundred and sixteen primary and secondary schools received basic school equipment, furniture, supplies, and consumables; 32,000 children received school supplies, including text books, school uniforms and shoes; and 24,000 received recreation and school-in-a-box kits.
- Forty-nine temporary classrooms, 15 teachers' quarters, and eight toilet blocks were constructed.
- One hundred and eighty teacher trainees from the Faculty of Education were deployed as temporary teachers for one month to mitigate the vacuum created by the fact that nearly 200 expatriate teachers chose not to return to work after the tsunami.

Together, these interventions made it possible for schools to reopen only two weeks after the scheduled start of the new school year. Work is now underway for the reconstruction and rehabilitation of another 47 schools and 20 preschools affected by tsunami.

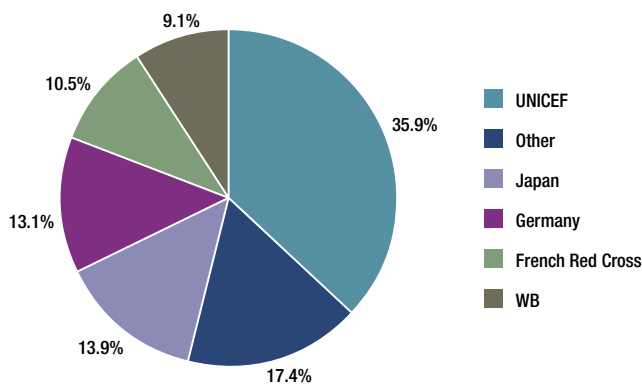


Figure 8: Funding for the Health and Education Sector by Donor



# ZAEEMA

## A LITTLE BRAVERY GOES A LONG WAY

Zaeema Ismail was 14 years old when the remote island of Gemendho was swamped by the tsunami. “I saw the first wave go over the reef and hit the shore,” she says. “It swept clean over the island, knocking over people, houses, bicycles, and dragging them out to sea.” Zaeema desperately held onto her two-year-old brother. Her mother stopped the other two children from being dragged out to sea. But sadly, the waters claimed the life of Zaeema’s grandmother, Mariyam. The loss was more than some of Zaeema’s family could bear. Her two siblings became mute and began to have screaming nightmares, her mother wouldn’t eat and became almost catatonic with grief—and the family began to disintegrate. Although Zaeema didn’t know what trauma was, she could see that there was something wrong with her once happy family. When UNICEF set up a trauma workshop on the island where her family had been displaced, Zaeema learned that the tsunami that hit her island was a freak occurrence—and that she had to help her family go through what was a normal grieving process. She got her family talking again by using trauma recovery methods she learned in the workshops. Now her family home is filled with chatter and laughter once more. Although Zaeema didn’t rescue anyone from the water or donate aid, the fact that she was such a rock for her family recently saw her winning an award. In Thailand this month she was presented with the Asian Heroes Award by Time Magazine. A simple trauma workshop and a brave girl have helped to get one family back on their feet and look forward to a life after the tsunami.







# LIVELIHOODS

“People think of the Maldives as a romantic holiday destination but on some islands 70 percent of income is from agriculture. The tsunami washed away fruit trees and vegetable patches leaving families with nothing but saline soil. Through our agriculture programme, women farmers are now harvesting pumpkins and watermelon, beans and papaya. And they can sell them to nearby islands.”

ALI IJAZULA, PROGRAMME MANAGER, CARE SOCIETY, ACTIONAID PARTNER IN THE MALDIVES



Prior to the tsunami, the Maldives benefited from twenty-five years of economic growth that resulted in a per capita income in excess of US\$ 2,100—compared to an average of around US\$ 500 per capita for the rest of South Asia. Much of the growth was due to the emergence of the Maldives as a major tourist destination, attracting upwards of 500,000 visitors annually. Direct revenues earned from the sector contributed directly to a third of GDP, and its wider impact accounted for more than 70 percent of GDP. Hence, given the hit the tourist industry took following the disaster, it is no wonder that the Maldivian economy has suffered over the last year, and is likely to continue to suffer into the next year. It is expected to contract by three percent in 2005 compared to a positive growth rate of seven percent in 2004.



## Fishing and Agriculture

The fisheries sector (fishing and fish processing) is the country's second largest industry, contributing roughly nine percent to GDP in 2004, and has continued to grow since the tsunami. Fishing employed about 11 percent of the labour force, prior to the tsunami, while about 20 percent of the total population was dependent on the industry for their primary income. The growth since the tsunami can be attributed to the increasingly sophisticated technology and boats used by the industry. However, the overall health of this sector of the economy masks negative social impacts in local communities, due to loss and damage and equipment.

Direct losses in the fisheries sector on reports received from islands were estimated at US\$ 13.13 million and indirect losses at US\$ 23.61 million. This covered loss of income and livelihoods of fishers and cottage-based processors. However, after more detailed assessment, which included IDP communities, carried out in September with assistance from the Food and Agriculture Organisation (FAO), direct losses were estimated at US\$ 24.75 million. Additionally, the research, demonstration, and training facilities of the Ministry of Fisheries, Agriculture, and Marine Resources (MOFAMR) were partially damaged, further undermining the planned programmes for 2005.

About half of all cultivated land on the inhabited islands was destroyed by the intrusion of salt water intrusion, with agricultural losses estimated at US\$ 6.46 million. Apart from the fields, perennial trees such as coconuts, breadfruits, mango, betel leaf, guava, and water apple were uprooted by the waves or died from salt toxicity. Banana was also severely damaged given its susceptibility to salt stress. On more than half the island the ground water aquifer has been seriously affected by salt water intrusion, and on still others the water quality has deteriorated. Destruction of port infrastructure and transport vessels also adversely affected farm incomes and rural livelihoods.

The period following the tsunami would have been the peak tourist season; and even those farmers whose crops were not affected by the tsunami nonetheless faced losses due to the severely reduced number island visitors. This remains of particular concern since the tourism industry only recently began sourcing supplies from local producers, and the linkage between domestic agriculture and the tourism sector is still tenuous.





## Getting People Back to Work

Helping thousands of Maldivians get back to work is a critical task. In addition to the loss of tourism, fishing equipment, and agricultural land, many families also lost their entire life savings.

Early on, the Government introduced a policy of urgent support of livelihood restoration entitled the Island Livelihood Revitalisation and Development Programme. Communities are receiving agricultural tools and seeds to restart crop production. Others are being given assistance to resume fishing and fish processing and to restart local businesses through cash-for-work initiatives, small grants, and micro-credit programmes. By the end of 2005, skills development initiatives will also begin, which will include the provision of tool kits and seed money to selected island communities to start implementing community development plans.

A range of activities, including small loans, women's livelihood, agriculture, fisheries, and waste management, are being implemented under the comprehensive umbrella of training and building capacities of community-based organisations (CBOs). The aim is to enable these CBOs to plan and implement projects by themselves in the future, but also to maintain and sustain achievements from the recovery phase. As a large proportion of the island population (around 16 percent) have traditionally been involved in voluntary activities, mobilising these resources is an important empowerment strategy, which at the same time reduces the risk of dependency.

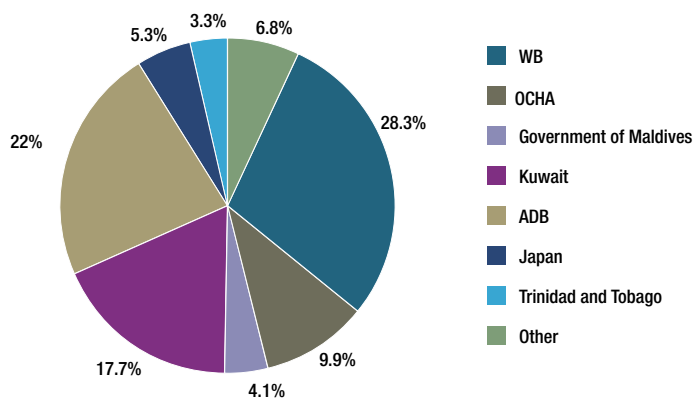


Figure 9: Funding for the Livelihoods Sector by Donor

The loss of equipment and boats, particularly those associated with pole and line tuna harvesting, has seen many struggling to re-establish their livelihoods. The loss of these livelihoods have had a ripple effect on associated cottage industries such as fish processing and drying, resulting in significant widespread unemployment and hardship in a number of communities.

Over the past year, the FAO, International Fund for Agricultural Development, ADB, JICS, the World Bank, and UNDP, have been working to restore fisheries-based livelihoods. Activities have concentrated on boat repair, vessel construction, and replacement of fishing gear. Three CBOs have been trained in fibreglass reinforced plastic boat construction and repair by FAO and MOFAMR boat building experts. This activity is providing an income and a profession to tsunami affected fishermen and out-of-school youth, and in the years to come will provide important employment to people trained in a skill for which there is high demand.

As previously noted, agri-business suffered greatly in the Maldives. In addition to larger farms, the tsunami destroyed countless small home gardens, which made an important contribution both to the domestic economy and to the family diet. Compensation of Rf. 3,127 (US\$ 245) was provided to 5,868 agricultural families under World Bank aid through the MOFAMR with additional claims now being assessed. Efforts of the Government and its partners have concentrated on replacement of lost productive assets such as seeds, planting material, fertiliser, and basic tools as well as the rehabilitation of soil and water resources and infrastructure, aiming at restoring the incomes and livelihoods of affected farmers as quickly as possible. Care Society has been active in mobilising community nurseries in different islands, while the ADB has funded the training of MOFAMR staff in plant production. The JICS has concentrated its agricultural efforts on the delivery of agricultural machinery to 23 islands, including much needed tractors, generators, composting machines, transport boats, and spare parts.

Officials of MOFAMR and various relevant authorities have received plant quarantine training from FAO, which has also advised the MOFAMR in setting up an effective plant and animal health quarantine system for the Maldives. The animal health component is being conducted under close collaboration with WHO as part of their partnership in preparedness to combat a potential avian flu pandemic.



## GIVING WOMEN AN EXTRA HAND

Ann Bloom, from Littlehampton on England's south coast, had no idea when she stood in the cold collecting money for tsunami relief that almost a year later she would get the chance to see how it is being spent. The Tesco supermarket, where Ann works, raised US\$ 26,000—one of the most successful stores in the UK chain that in total raised over US\$ 4 million for the UK Disaster Emergency Committee's Tsunami Appeal. Arriving in Maabaidhoo, Laamu Atoll, Ann was treated to a display of coir rope and thatch weaving by the island's Women Development Committee. Many economic activities have not yet revived, particularly such traditional livelihoods pursued by women. But funding provided by this and other appeals is providing women with equipment and opportunities lost to them during the tsunami. "It was an amazing and humbling experience," said Ann. "It was incredible being able to put faces to the fundraising. There was a team of us who raised the money, I was just lucky to have the opportunity to find out where the money went and it was wonderful to see so many happy faces looking forward to the future."





# ENVIRONMENT AND DISASTER MANAGEMENT

“Before the tsunami people knew about global warming and the potential threats. But now everyone is much more aware of natural disasters, especially flooding and other environmental risk factors. The Maldives was caught off-guard, so we are working to put warning systems in place that will make us better prepared to react to the next disaster.”

SVEND ERIK SØRENSEN, UNITED NATIONS ENVIRONMENT PROGRAMME







The tsunami has highlighted, once again, the Maldives vulnerability to natural disaster and climate change. The low-lying islands, shallow reefs and lagoons of the Maldives make up a fragile marine-based environment. Yet the country’s vulnerability to natural disasters was always thought to be moderate, having had no history of frequent or destructive hazards. Obviously, the tsunami has altered that perception dramatically and forever.

Environmental features such as low elevation, beach erosion, high freshwater table, and lack of coastal vegetation—combined with the population’s dependency on tourism and fisheries, high import dependence, and limited transport facilities—make the Maldives one of the most environmentally vulnerable countries in the region if not the world. Today the country faces three major disaster risks: climate change, particularly resulting in rising sea levels; storm surge; and tsunamis. It is also exposed to droughts, heavy rains, and high waves caused by cyclones in the southern Indian Ocean.

A rapid environmental assessment completed by United Nations Environment Programme (UNEP) shortly after the tsunami found that coastlines were altered, beaches and harbours eroded, and waste washed out to sea. Trees and mangroves were uprooted and coral damaged. Rubble and asbestos lay on beaches, groundwater was polluted, and the soil was inundated with seawater. In addition, as a direct result of this environmental damage many livelihoods were lost or severely affected. Although the tsunami created a number of specific environmental problems, uncontrolled reconstruction activities will further exacerbate the chronic environmental problems that pre-date the tsunami including poor waste management and sanitation systems.

The traditional sustainable practices of the Maldivian people have supported life on the islands for over 4,000 years. However, modern lifestyles do not support the protection of the fragile marine environment upon which they are so dependent. For example, a lack of waste management facilities to deal with toxic, human, and fish processing waste, and a high dependency on diesel fuel leaves a question mark as to whether many remote islands have a sustainable future. The tsunami and the rapid environmental assessment that was completed highlighted many of these unsustainable practices. By building back better and building back greener, the Maldivian Government and its partners have had an opportunity to promote more sustainable practices and strengthen environmental institutions throughout the country. Already, improved rainwater harvesting and waste management, investment in sustainable sanitation solutions, and exploration of the potential for renewable energies are being undertaken as part of the recovery and development programme.

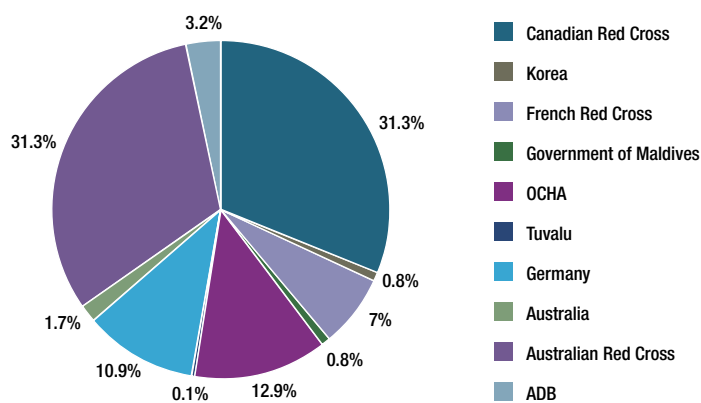


Figure 11: Funding for the Environment and Disaster Management Sector by Donor



## Disaster Management

Since January 2005, the Government and island communities have been increasingly planning reconstruction activities in a manner that minimises risks to the environment and public health. The United Kingdom Department for International Development (DfID) and UNEP are assisting the Government to ensure that reconstruction work is carried out in an environmentally sustainable manner. The ‘building back greener’ principle has been promoted for the reconstruction process, and guidelines such as the Tsunami Reconstruction Design Principles have been developed to facilitate this goal. The Government and its partners are also creating the capacity within Ministry of Environment, Energy and Water to apply environmental impact assessments to future development programmes and to promote sustainable waste management policies and practices.

The tsunami created approximately 290,000 m<sup>3</sup> of debris and waste in the Maldives, much of which accumulated on beaches and posed a serious threat to public health, groundwater, soils, and coral reefs. This situation, coupled with the country’s pre-existing waste management problems, emphasised the desperate need for an effective cleanup and waste-management programme.

In response, the partners in the environmental sector—the UN, the Australian and Canadian Red Cross (ARC/CRC), AusAid, and the ADB—working in consultation with all the stakeholders, implemented a variety of new and more sustainable programmes. During one such programme, implemented by UNEP, hazardous waste from a total of 89 islands was collected and stored, and more than 40 local men and women were trained in hazardous waste clean up and mobilised in the field.

The Maldives’ need for a nationwide an early warning system and a disaster risk profile has been made dramatically clear. Since the tsunami, UNDP and NDMC have completed an Early Warning System study, and a basic early warning system will be set up by March 2006. All atoll offices are now equipped with satellite phones, and five Emergency Crisis Centres with state of the art communications systems have been established. Training programmes in disaster response and first aid have been held for NDMC staff and volunteer community groups, and a Tourism Sector Disaster Management Plan has been developed. In addition, construction of safe shelters on islands identified as most at risk is being undertaken by JICS, UNDP, IFRC, CRC, and British Red Cross.

The Government’s long-term disaster mitigation programme, The Safe Islands programme, builds on its pre-tsunami goal of increased population consolidation. The existing programme has been adapted to accommodate the need for disaster risk management so that ‘safe’ islands will receive a greater investment in sea walls, more solidly constructed buildings, buffer zones, and drainage systems. Improved standards of housing and infrastructure are also part of the overall plan.

The greatest challenge will be to sustain the present level of interest and motivation to address disaster management and to have all ministries and departments integrate disaster management into their normal development programme. This will mean reviewing all development initiatives prior to implementation to ensure that high-risk factors are not reintroduced in the process. Another key challenge is to help each person and family to know and practice personal safety management and to increase the confidence and resources of communities to better manage disasters.





## GETTING MY HANDS DIRTY

**Mr. Nooree Ahmed is Deputy Island Chief in Hoarafushi Island, Haa Alifu and Team-leader of the Hazard Waste Clean Up Team 1, responsible for the Northern part of the Maldives.**

"I was sent from my island to participate in the UNEP supported hazard waste clean up training and became the Team-leader for Team 1 covering the Northern part of the Maldives. The program we are carrying out is of great benefit for the whole of Maldives. It is the first real activity that tackles waste matters on our islands. We get different impressions from the different islands where we are working and can see different priorities. But hazardous waste clean up and collection has a high priority everywhere. The island people show great interest in what we are doing. We conduct briefing meetings with the different island communities. I am proud to be a member of the UNEP hazardous waste clean up team, because I can take an active part in ground water and environmental protection measures for our country. We have to extend the programme with important awareness campaigns. When I finish the program and go back to my island I will become involved in the Australian Red Cross/Canadian Red Cross (ARC/CRC) and United Nations Development Programme awareness programme and encourage people to dispose of their hazardous waste in the waste management centre that will be built by the ARC/CRC. More important than to clean and to collect hazard waste is to avoid it; we will do our best to avoid it in the future, for example, asbestos roof sheets on my island."





# REBUILDING INFRASTRUCTURE AND UPGRADING

“Before the harbour was built, we had to put people on duty overnight to watch the boats and make sure they were safe—especially when it was rough. Now we can get supplies and get on and off the island safely ... the moorings are much safer.”

IBRAHIM SHAHEED, DHONI OWNER ON EYDHAFUSHI ISLAND, BAA ATOLL



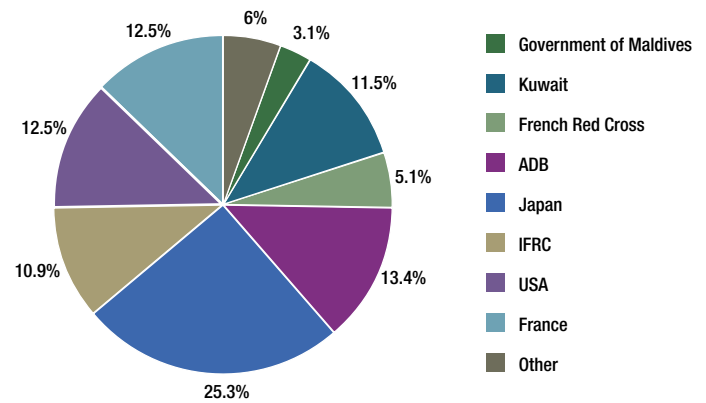


Figure 11: Funding for the Infrastructure Sector by Donor

The fishermen and boat builders were casually going about their business of cleaning their boats, repairing equipment, chatting with their friends, and preparing for fishing on the morning of 26 December 2004. Most of the boats were tied to the quay wall of the harbour, tethered to the sandy beaches or being repaired and sitting on simple stands when the sea began to rise. No one thought too much about it as often, during storm surges, the sea rises and waves slam the small boats against the beaches or harbour walls. However, when it continued to rise, some of the islanders thought that the world was coming to an end and their island was being consumed by the sea. Panic did not set in as the sea rise was not rough; it was not like the waves in Aceh or Phuket, but more like water slowly rising in a basin up to, some say, three metres above the land. Everything was floating or turned upside down. People were trying to rescue their personal belongings and at the same time save their lives and those of their children.

It only lasted a few minutes. Actually, the damage to the sea walls, breakwaters, and harbour quay walls did not occur until the sea began to recede, which was when the poorly constructed marine structures—founded on sandy bottoms or old dead reefs and held together with a poor mix of cement and salt water, began to break up. Sand quickly filled up the harbours that, according to local marine codes, are only about three metres deep at low tide, which is sufficient for the shallow draft of small vessels.

It has been estimated that 36 jetties were damaged. Approximately 370,000 m<sup>3</sup> of sand will need to be removed from the harbours by dredging in order for the fishing and trading economy to be restored.

It has been estimated that over a third of all navigation aids were lost or destroyed. With the large number of rescue and aid vessels travelling to the islands, the possibility of striking a reef increased dramatically. In addition, five causeways connecting smaller islands were partially damaged or destroyed, as was heavy construction equipment at the Malé International Airport.

It has been estimated that about US\$ 73 million would be required to rebuild the harbours on 107 islands, dredge the harbours to the required depth, replace the navigational aids, and replace or repair damaged equipment and private/public vessels. Currently, only about US\$ 22 million has been committed to these tasks by the donor community.<sup>4</sup>

Over the past year the Government has repaired or replaced 31 navigation light beacons, and reef and harbour entrance markers on 38 islands. Two causeways in the Laamu Atoll are now under repair with work being done by the Japanese Government. UNDP has surveyed the harbour damage on 21 islands. With around US\$ 6 million provided by Australia, Belgium, France, and Japan, there are sufficient funds to reconstruct seven to eight harbours, of which one, on Baa Atoll Eydhafushi Island, has been completed. In addition, the ADB has provided about US\$ 3 million for the construction of three harbours.

## Energy

On many islands, when the water level began to rise, the power houses and their diesel-turbine generating units (typically called 'gen sets') were completely submerged, damaging both the diesel engine and turbine. Some of the engines could be repaired by draining the sea water from the crank case and purchasing minor spare parts, but most of the turbines were significantly damaged. Many of the simple power house structures were undermined by the scouring caused by the receding sea, cracking the foundations or collapsing the walls entirely, and floating debris, such as small boats, rammed into them. Distribution power cables were uprooted, leaving twisted cable and connection boxes damaged beyond repair. Simple street lighting fixtures were undermined and often collapsed.

Given the sharply increased cost of diesel fuel, residents have been faced with much higher generating costs than in the past. Almost immediately following the tsunami, the Government contracted local engineering firms to conduct an energy-sector damage assessment and to prepare the designs and technical specifications for the most severely affected islands. The original damage estimate for the energy sector was about US\$ 4.6 million. However, this has been increased to about US\$ 21.4 million. Current donor commitment is about US\$ 13 million, of which the major international donors are the IFRC, ADB, Japan, the US and the UN.

It has been suggested that the Maldives should take a more serious look at renewable energy, particularly solar and wind-generated power. Japan has already agreed to construct two buildings that will include solar panels for some of the power generation and UNICEF has pilot programmes for solar-powered schools planned for 2006/2007. The CRC has offered to pilot a wind-power project at a new island community being constructed by the IFRC on Dhuvafaru island. Solar power will also be utilised as a renewable energy source on this island. The Maldives Government is addressing a more comprehensive energy policy, which is expected to be adopted in 2006.

<sup>4</sup> These figures are taken from DAD as of 28 November 2005 and may not contain all financial information



FOR 2006

# CHALLENGES

The Maldives is unique amongst tsunami affected countries in terms of the disaster's nationwide economic and social impact. For this reason, the principle of 'build back better', with its explicit focus on quality of outcome, takes on a far greater significance and has wider implications than may be the case in the other recovering nations. To ensure a healthier and more prosperous country than existed prior to 26 December 2004 will require more than the rebuilding of houses and infrastructure. Good governance, equality, environmental protection, disaster risk management, community consultation, empowerment of the disenfranchised, protection of the vulnerable, and mobilisation of the economy are the foundation stones upon which the Government, the community and their international partners seek to rebuild a stronger, more vital nation.







Numerous challenges lie ahead in the coming year and all partners in the recovery and reconstruction effort must unite to overcome them.

1. The biggest challenge for 2006 will be attracting donor resources to fill the funding gap of US\$ 145 million.
2. Provision of safe, durable housing, with access to safe water and sanitation for all families will continue to be an issue in 2006.
3. Expansion of viable, diversified economic activity with an emphasis on job creation for young people is essential but may prove difficult.
4. Shifting the focus from simply replacing assets lost to programmes that help all contributors to the economy, including women and vulnerable groups, and also incorporate social welfare and community consultation policies.
5. Policies within recovery efforts dealing with gender, particularly vulnerability of women and children to increased risk of violence and sexual abuse, require strengthening.
6. Increased attention must be given to improving communications with the most affected communities and to provide them with regular updates on progress in shelter reconstruction.
7. The Government is currently embarking on a political and judicial reform programme that will see greater transparency and accountability. These steps must be supported by the international community as part of the recovery process.
8. A holistic approach to water conservation and sanitation, waste disposal, and renewable energy must be developed.
9. Due to the reforms taking place in the country, recovery and reconstruction is taking place in a political and social environment which is considerably different from pre-tsunami conditions, This in itself poses unique challenges for the coming year.
10. There is a need for nutrition improvement, agricultural diversification and linkage of farmers production to the resorts' demand.

Determining how well these challenges have been overcome will provide all stakeholders with a clearer picture of how recovery in this nation is progressing. But it will also provide us with a vision for the future—a vision that will unite us all, Maldivians and international community alike. Only in this way can we hope to maintain the momentum so desperately needed over the coming years and ensure the full recovery of the Maldives, a nation which, despite disaster, has united to build back better.



## BIBLIOGRAPHY

### *After the Tsunami – Rapid Environmental Assessment.*

United Nations Environment Programme. February 2005.

### *Development Assistance Database.*

website: <http://dad.finance.gov.mv>

### *Millennium Development Goals, Maldives Country Report.*

Ministry of Planning and National Development, Malé, Republic of Maldives.  
September 2005

### *Ministry of Finance and Treasury.*

website: <http://www.finance.gov.mv>

### *Ministry of Planning and National Development.*

website <http://www.planning.gov.mv/>

Last accessed 21 December 2005.

### *Maldives Tsunami: Impact and Recovery. Joins Needs and Assessment.*

World Bank, Asian Development Bank, UN System. February 15, 2005  
Available online at [http://www.undp.org/bcpr/disred/doc/tsunami/maldives/jn\\_assess.pdf](http://www.undp.org/bcpr/disred/doc/tsunami/maldives/jn_assess.pdf)  
Last accessed 21 December 2005.

### *National Disaster Management Centre.*

Official Website: <http://www.tsunamimaldives.mv/>

Last accessed 21 December 2005.

### *National Recovery and Reconstruction Plan.*

Government of the Republic of Maldives, 2005.

Available online at <http://www.tsunamimaldives.mv/docs/Publications/NRRP.pdf>

Last accessed 21 December 2005.

### *Post-Tsunami Environmental Assessment. Maldives.*

United Nations Environment Programme, June 2005

### *The President's Office, Republic of the Maldives.*

Official Website: <http://www.presidencymaldives.gov.mv/v3/>

Last accessed 21 December 2005.

### *Republic of Maldives Tsunami Impact and Recovery.*

Joint Needs Assessment, Asian Development Bank, World Bank and UN System,  
Maldives February 2005.

## ACRONYMS

ADB	Asian Development Bank
AmRC	American Red Cross
ARC	Australian Red Cross
AusAid	Australian Agency for International Development
CRC	Canadian Red Cross
BRC	British Red Cross
DAD	Development Assistance Database
DfID	United Kingdom Department for International Development
ECHO	European Commission Humanitarian Office
FAO	Food and Agriculture Organisation
GDP	Gross Domestic Product
HIRU	Housing and Infrastructure Redevelopment Unit
IDP	Internally Displaced Person
IFRC	International Federation of the Red Cross and Red Crescent Societies
INGO	International Non-Governmental Organisation
JICS	Japanese International Cooperation System
MDG	Millennium Development Goal
MIDP Unit	Managing Internally Displaced Persons Unit
MOFAMR	Ministry of Fisheries, Agriculture and Marine Resources
MOFT	Ministry of Finance and Treasury
NDMC	National Disaster Management Centre
NERU	National Economic Recovery Unit
NGO	Non-Governmental Organisation
NRRP	National Recovery and Reconstruction Plan
NSS	National Security Service
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
SPHERE	Humanitarian Charter and Minimum Standards in Disaster Response
UNDAC	United Nations Disaster Assessment and Coordination
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WB	World Bank
WFP	World Food Programme
WHO	World Health Organisation



unicef





World Health Organization



 BritishRedCross



 CROIX-ROUGE FRANÇAISE

 Australian Red Cross

 American Red Cross

