

Building Back Better

A Review of the National Recovery and Reconstruction Plan

*A background paper prepared by the Government of the Maldives
for the Maldives Partnership Forum
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Introduction and overview

The ambitious concept of “Building Back Better”—a phrase first used by former US President Bill Clinton in his role as UN Special Envoy for Tsunami Recovery— has been a guiding force in the reconstruction of the Maldives following the devastating tsunami of December 2004. Building Back Better not only addresses the urgent issues of the day, but it envisions the kind of society that the people of the Maldives will enjoy in five, ten, even fifteen years from now.

In the Maldives the Asian tsunami caused nationwide destruction. Over a third of the country’s 290,000 people were directly affected, and some 29,000 —fully 10 percent—had to leave their homes, which were either damaged or destroyed. Nationally, the disaster wiped out an extraordinary 62 percent of the country’s Gross Domestic Product (GDP), as compared to 3 to 5 percent GDP in other tsunami-affected nations. With such a level of destruction came the need for massive humanitarian assistance, relief, recovery, and reconstruction. But with recovery and reconstruction came also a unique opportunity.

Building Back Better in the Maldives is over and above creating tsunami-proof housing for this and coming generations, and more than developing harbours and jetties that will sustain tidal surges. Building Back Better is also about developing a stronger and more diversified economy; about having a nationwide health system that will be able to respond to the needs of all the people; about creating an education system that meets and exceeds international standards; about providing enhanced water and sanitation systems that set new standards for waste management and, thereby, about continuously including environmental issues in development. And finally, Building Back Better is about laying the foundation for democratic reform.

Taking stock

Today, 18 months after the tsunami, the Maldives has made considerable progress, but it continues to face significant challenges in recovery and reconstruction. A number of important milestones have been achieved in reviving livelihoods and providing social services, but recovery in some sectors has been slowed by funding shortages and implementation difficulties. Housing, water and sanitation, and infrastructure redevelopment programmes are unfortunately progressing slower than had been expected. Also of concern is the fact that such delays inevitably lead to increased costs,

which further affects the funding shortfall. Therefore, it is crucial that international development partners work hand in hand with the Government of Maldives to address these issues jointly and to ensure that the recovery and reconstruction period is kept to an absolute minimum.

While the government has instituted mechanisms to replace lost assets through loan programmes and in-kind assistance, broad-based economic recovery programmes need to be further strengthened and accelerated. Despite the huge inflow of assistance to the Maldives, more is still needed if the key sectors are to be fully built back better. The Government of Maldives has made huge contributions towards these efforts, leading to a budget deficit of US\$ 93 million in 2005, and will spend even more in 2006. This budget deficit, representing nearly 15 percent of GDP, is not sustainable and therefore comes at great cost to the Government's efforts to support the nation.

The first three months immediately following the tsunami were managed extremely well by the government – today seen by many as a “best practice” with the establishment of the National Disaster Management Centre (NDMC). However, as the government returned to more normal working practices while at the same time continued to address tsunami needs, some coordination and decision making fell through. This, combined with certain capacity constraints on the part of the government, has contributed to delays in project implementation. For example, the gathering and analysing of data in a very short time and thereafter prioritizing the information to allocate resources from development partners has been one such capacity constraint.

Another closely related issue is the limited experience of the government to involve and mobilize communities in such major recovery and reconstruction efforts. While there has always been community involvement, the necessity of taking quick decisions involving many different sectors and stakeholders was completely new to the government, and this has understandably resulted in some criticism. However, with support from its partners in the international community, the government is now picking up very quickly, though certainly still with room for improvement. Finally, it must also be noted that differing approaches to recovery and reconstruction by the development partners have further contributed to the delays.

Critically under-funded sectors

- Housing/Shelter
- Internally Displaced Persons
- Infrastructure – harbours and jetties
- Power and Energy
- Water and Sanitation

Housing/Shelter

Housing was one of the sectors most affected by the tsunami, with more than 5,500 houses damaged and more than 2,900 destroyed. The waves broke boundary walls and facades and, by eroding land, caused some houses to collapse altogether. Though the challenges of the housing sector are not on the same scale as other tsunami affected

countries, the sheer logistical challenges of the Maldives has made housing/shelter reconstruction a very complex problem. With some 195 inhabited islands spread out over 20 atolls and more than 600 kilometres, transportation alone is a major issue. In addition, there is limited or no access to many affected islands due to lack of a navigable harbour or a safe jetty. Finally, there is a significant shortage of skilled labourers to perform the actual work that is needed.

For all the obstacles and difficulties, however, all partners are aggressively heeding the call to “build back better”. While there are minor differences in house designs and plot sizes, all agencies have agreed that new construction must be able to withstand whatever the weather might bring, and that these homes must be safe for generations to come, not just the short term. Above all, of course, they should be tsunami-proof. In the past, concrete was mixed badly, foundations were weak, and it was not uncommon for cracks to appear in a matter of months. Indeed, much of the tsunami damage could have been avoided had the houses been better built to start with. Today all that has changed. Foundations are being dug deeper and built wider, reinforced with the addition of light steel to evenly distribute the weight. In addition, some community buildings are being designed with two stories, others with tsunami platforms, and still others are being built on reclaimed land raised above any future tidal surges.

Fresh water is another essential staple of island life. Consequently, household rain water harvesting and storage systems are provided to each new house. Rain water overflow from household systems is diverted to wells to recharge the ground water; and water-tight septic tanks at each house are linked to a small-bore effluent discharge system. To avoid the growing problem of ground-water contamination, final discharge is to deep water off-shore. With an ever greater concern for the nation’s ecosystem, the use of coral for wall materials and aggregate is discontinued, and imported river sand and aggregates are specified for wall and concrete construction.

The Joint Needs Assessment prepared by the World Bank, Asian Development Bank, and the United Nations based the costs for the housing sector on 2-bedroom units; but following community consultations the government decided to provide 3-bedroom units, increasing the per unit cost from US\$ 19,500 to US\$ 23,400. This has since further increased due to increases in construction materials, oil, and related transportation costs. Cost per housing unit is today budgeted at US\$ 30,000 for reconstruction, with repairs averaging US\$ 4,470.

The overall funding needs in the housing sector have therefore increased substantially compared to the initial estimates. In addition, thorough surveys conducted in 2005 by the Ministry of Planning and National Development, Ministry of Construction and Public Infrastructure, and the United Nations Development Programme (UNDP) demonstrate that the number of houses in need of repair and reconstruction has also increased over and above the initial assessment. Today – 18 months after the tsunami – more than 600 houses have been repaired and another approximately 3,000 are in various stages of repair. The remaining houses are either completely un-funded or no repair work has started or they are in the very early stages of repair. In terms of reconstruction, nearly 100 houses have been fully reconstructed and more than 1,250 are currently being

reconstructed. Of the remaining houses in need of reconstruction, 896 houses are unfunded with the expectation of financing these needs from loans. Total funding gap for the housing sector is estimated at US\$ 37.9 million. However, subtracting pipeline loans for the reconstruction efforts reduces the funding need to US\$ 11.3 million.

Housing/Shelter			
NRRP Requests	Revised Requests	Committed (1 June 2006)	Funding need
US\$ 93,471,000	US\$ 120,604,719	US\$ 83,224,719	US\$ 11,380,000

Internally Displaced Persons

Closely related to the housing sector is the issue of internally displaced people (IDPs). Being displaced either on one's own island or on some other island is a totally new phenomenon in Maldives. As such, communities showed great sympathy and support towards those who had lost their property and homes in the disaster. However, as time went on, social pressures invariably began to build up with the loss of privacy and as host families bore the brunt of caring for large numbers of people.

To address these and other issues, IDP committees have been formed to discuss their needs and involve them in the decisions affecting their lives. An IDP register has been established, and community consultations on issues of housing, relocation, and formulation of Island Development Plans are underway. Programmes are being implemented to address the social needs of communities and vulnerable groups, such as women and children, including the establishment of Family Protection Units. Similarly, programmes to empower IDPs and their hosts in managing their own affairs are also being carried out. The UNDP played an important role in supporting the initial establishment and strengthening of the Unit for the Management of Internally Displaced Persons.

Some of the challenges in managing IDPs include the difficulties of communication and of ensuring the timely flow of information to and from displaced persons. It is therefore essential to set up mechanisms for information exchange and consultation, and establish an on-going tripartite dialogue among donors, communities, and the government in order to strengthen coordination and effectively engage the communities in the recovery process. Technical assistance is needed in capacity building for community negotiation and collective decision making to ensure active and meaningful participation of all relevant parties in reaching sustainable outcomes.

A major sector under the National Recovery and Reconstruction Plan (NRRP) that received very limited funding support was Administration. The bulk of the costs associated with this sector were to support logistical arrangements in providing food and water for the IDP group as well as emergency shelter. Since these activities could not be deferred to a later stage, the government had to bear the costs, significantly contributing to the record budget deficit of US\$ 93 million for 2005. Continued costs related to IDPs are projected at more than US\$ 23 million for 2006 and 2007.

Infrastructure – harbours and jetties

Shortly after the tsunami a list was compiled of 104 islands that had sustained damages to their harbours and/or jetties. From this, a prioritized list of 40 islands was identified for dredging harbours to the required depth, replacing navigational aids, replacing or repairing damaged equipment, or for entire reconstruction. Currently, only 11 harbours benefit from funding from a number of different sources, mostly loans; and these are in various stages of progress/implementation, from the design stage to completion.

The government has obtained a variety of loans to support this important sector of the economy, which is essential for the fishing and tourist industries as well as a basic precondition for economic growth. However, given the slow progress of the past 18 months, many projects have increased in cost from their initial estimates. Furthermore, some harbours not initially deemed in need of repair/reconstruction have later proven to be very much in need of such repair. Costs differ from project to project depending on the scope of work involved, with one project priced at more than US\$ 20 million (as land reclamation is part of the overall project), while others need more basic repairs requiring a few hundred thousand dollars.

It was initially estimated that about US\$ 73 million would be required to rebuild the harbours in the Maldives as well as provide assistance for repair work at Male' International Airport. However, with changed needs – both in scope and numbers – the funding requirements are now estimated at being close to US\$ 80 million. To date, US\$ 37.6 has already been committed towards the sector and a number of loans are in the pipeline to further minimize the funding shortfall, but it is estimated that a total of US\$ 42.7 is still needed to fully meet all requirements.

Some of the features for building back better include utilization of pre-cast concrete elements for the quay walls that would replace the original structure made out of “gunny sacks” – basically burlap bags filled with dirt. As designed, the elements are pre-casted and hardened before being installed. A steel bar with a 45 millimetre diameter steel bar is tied to a concrete anchor block to make the element secured and firm. When completed, the structure is expected to be far more durable and stable than what it replaced. It will also entail less maintenance cost to the government.

Another aspect of building back better involves dredging the entire harbour basin to an average depth of about 3.0 metres below mean sea water level. This is expected to facilitate larger vessels and *dhoanis* (traditional wooden boats) with a total length of about 80 - 100 metres, which are the main transportation vessels for goods and services.

Transportation – harbours and jetties			
NRRP Requests	Revised Requests	Committed (1 June 2006)	Funding shortfall
US\$ 73,010,000	US\$ 80,410,494	US\$ 37,621,110	US\$ 42,789,384

Power and Energy

The tsunami caused severe damage to the electrical infrastructure of the country – totally disrupting the power supply in at least 95 islands or nearly 50 percent of all islands with electricity. The extent of the damage varied from island to island, but in almost all instances it affected distribution networks, i.e., cables, distribution boxes, and household connections. In some islands powerhouses, generators, and switchboards were also damaged. The original estimate for repair was set at no more than US\$ 4.6 million. However, thorough assessments completed in August 2005 revised the funding need upwards to US\$ 21.4 million. The main reasons for such an increase were three-fold: the original estimate was based on the costs of the old systems, now outdated and inadequate; the extent of the damage was not properly assessed; and, in line with the build back better policy and in order to avoid a heavy reliance on diesel/oil, it has been suggested that the Maldives should take a more serious look at renewable energy, particularly solar and wind-generated power. For these reasons a more comprehensive energy policy is currently being drafted and is expected to be adopted later in 2006.

Currently, commitments towards the power and energy sector are just below US\$ 10 million, with an estimated funding gap of nearly US\$12 million. However, this funding can increase with about US\$5.4 million, which is the total of three power and energy projects being financed on Dhuvaafaru and Laamu Gan and not directly linked to the NRRP project activities. In addition, nearly US\$ 0.7 million is expected to be requested for Vilufushi. As with the infrastructure sector, it is essential for Maldives to have an adequate and reliable power supply if economic growth is to happen.

Power and Energy			
NRRP Requests	Revised Requests	Committed (1 June 2006)	Funding shortfall
US\$ 4,600,000	US\$ 21,400,000	US\$ 9,212,851	US\$ 2,187,149

Water and Sanitation

Prior to the tsunami no island other than Male' was connected to a sewerage system. Toilets consisted of soak-pit septic tanks, though some islands discharged 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 rushing sea water swept over these facilities it also mingled with the island's shallow wells and groundwater supplies, contaminating the freshwater systems.

To avoid similar 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. NRRP requirements were stated as just over US\$ 45 million, and external assistance consisting of loans and grants account for more than US \$55 million. However, it has become clear that reconstruction efforts far exceed the resources available and that additional needs upwards of US\$ 65 million will be included in the 7th National

Development Plan and undertaken as and when domestic and/or external resources become available.

Sectors with limited or no additional funding requirements

- Health
- Education
- Environment
- Disaster Risk Management
- Livelihoods—fisheries and agriculture

Health and Education

While it can be very difficult to assess if a sector has received sufficient funding to meet all requirements, in terms of the nation's health and education sectors this is fortunately the case. In fact, the health sector has received commitments substantially over and above what was originally requested. However, these funds are not all allocated towards the original requests, and fortunately a lot of the funding made available can be used for long-term development and further capacity building. The education sector has received funding to meet original requirements, but to further expand and develop this important sector additional resources are needed under the 7th National Development Plan.

Environment

While the environment sector received support for only one project (Disaster Waste Management) and in-kind contributions for three other projects identified immediately after the tsunami, the sector finds that what was not funded as part of the tsunami relief are either issues that are no longer relevant or that will be placed under the auspices of the 7th National Development Plan.

Disaster Risk Management

The disaster risk management sector was originally forecasting funding requirements of US\$ 7.4 million but has attracted less than US\$ 4 million, seemingly with an outstanding funding requirement of US\$ 3.5 million. However, the sector now estimates that existing needs can be met in an adequate fashion with an additional US\$ 1.5 million. Under the disaster risk management sector, primary focus has been on support for a central early warning system and on strengthening emergency operation centres (one central/five regional). Support for communication equipment for the Police and National Security Services compliments these efforts by ensuring nationwide coverage.

Livelihoods—fisheries and agriculture

Fisheries and agriculture have traditionally been the main livelihoods in Maldives, but with the emergence of the Maldives as a major tourist destination, attracting upwards of 500,000 people annually and with further increases projected, the two traditional sectors today accounts for less than 10 percent of GDP. However, more than 20 percent of the

population depends on fisheries and agriculture as their primary source of income. Original funding estimates for the fishing sector have been revised significantly upwards, with an existing funding need of nearly US\$ 10 million. However, the bulk of these resources is needed for long-term development and will hence be part of the 7th National Development Plan. Financing will be mobilized under this heading. Other livelihoods activities, such as small and medium enterprises and micro-credit schemes, have been initiated since the tsunami and will also contribute to continued economic growth.

Funding status as of 14 June 2006

The table below outlines the critically under-funded sectors as well as sectors with small funding needs. The funding need excludes pipeline loans for the reconstruction of houses.

Sector	NRRP Requests	Revised funding needs	Donor Commitments for NRRP(USD)	Funding need
New Host Islands	\$ 15,000,000.00	\$ 15,000,000.00	\$ 20,337,186.00	\$ -
Environment and Natural Resources	\$ 9,800,000.00	\$ 9,800,000.00	\$ 14,466,857.00	\$ -
Power & Energy	\$ 4,650,000.00	\$ 21,400,000.00	\$ 9,212,851.00	\$ 12,187,149.00
Administration	\$ 50,000,000.00	\$ 5,544,000.00	\$ 3,110,000.00	\$ 2,434,000.00
Transportation	\$ 73,008,000.00	\$ 80,410,494.00	\$ 37,621,110.00	\$ 42,789,384.00
Agriculture	\$ 11,140,000.00	\$ 12,870,000.00	\$ 10,115,000.00	\$ 1,025,000.00
Housing	\$ 93,468,000.00	\$121,804,719.00	\$ 83,224,719.00	\$ 11,700,000.00
Water Sanitation & Drainage	\$ 45,644,000.00	\$ 45,644,000.00	\$ 55,951,447.00	\$ -
Livelihoods	\$ 17,400,000.00	\$ 17,400,000.00	\$ 9,560,482.00	\$ -
Education	\$ 21,157,514.00	\$ 21,157,514.00	\$ 32,569,080.00	\$ -
Disaster Risk Management	\$ 7,400,000.00	\$ 7,400,000.00	\$ 3,834,827.00	\$ 1,500,000.00
Fisheries & Aquatic Resources	\$ 14,220,000.00	\$ 24,750,000.00	\$ 15,320,000.00	\$ 9,430,000.00
Health Nutrition & Social Protection	\$ 12,175,534.00	\$ 12,175,534.00	\$ 33,375,509.00	\$ -
Total for NRRP	\$375,063,048.00	\$395,356,261.00	\$ 328,699,068.00	\$ 81,065,533.00