



Risk, Livelihoods and Vulnerability Programme - May 2008

## *Cyclone Nargis: What are the Lessons from the 2004 Tsunami for Myanmar's Recovery?*

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On 2<sup>nd</sup> May 2008 Cyclone Nargis caused catastrophic destruction and resulted in the deaths of nearly 80,000 people in Myanmar. In the wake of one of the deadliest natural disasters in the country's recent history, nearly 56,000 people are still missing, over 1 million are homeless and as many as 2.4 million remain affected. The magnitude of the impacts of this tropical storm on an already impoverished country have been compared to those experienced by Sri Lanka, Indonesia and Thailand as a result of the 2004 Indian Ocean Tsunami, as well as to the devastation wrought by the 1991 cyclone in Bangladesh.

First and foremost, it is of vital importance that sufficient humanitarian assistance is allowed into the country to ensure the survival of millions of affected people in the disaster zones.

Actions taken now in the immediate relief and recovery phase have long term development consequences. The longer term recovery of the Myanmar people from this tragic event and their vulnerability to future disasters is greatly determined by current decisions and actions. Whilst these issues may receive scant attention in the immediate aftermath of the disaster and in light of the overwhelming daily challenges affecting the survivors and relief workers, important lessons on how to build more resilient communities have been learnt recently by Myanmar's near neighbours following similarly severe coastal hazards. It is crucial that these messages are borne in mind as people respond to the immediate basic humanitarian needs of affected people, including safe drinking water, sanitation, housing, health, food and livelihood restoration, and begin to turn their attention to longer term rehabilitation. Assessments conducted in the initial weeks after the disaster are likely to inform recovery and reconstruction for years if not decades to come.

Nearly three and a half years after the 2004 Tsunami, it is evident that many short-term restoration initiatives including environmental regeneration and housing, infrastructure, livelihoods and economic reconstruction initiatives were accompanied by considerable negative implications for the longer-term sustainability of coastal ecosystems and people's livelihoods. So looking back on the rich experience and knowledge gained from the 2004 Tsunami and other tropical storms, such as the 1991 Bangladesh Cyclone, the 1999 Orissa Cyclone and Hurricane Katrina in 2005, what

relevant lessons are there for Myanmar? And looking forward, how are immediate responses to disasters best designed to be in balance with longer term recovery?

- First, there is a need for **coordinated collective action**. A seemingly obvious point but challenging principle to realise. During the 2004 Tsunami, many organisations were keen to respond and were under severe pressure to rapidly and transparently distribute considerable amounts of money pledged by the public, and to realise specific donor goals that sometimes diverged from needs on the ground. A lack of collective action, and at times blatant competition between agencies delivering humanitarian and livelihood support, governments, and those directly affected by the tsunami, represented a considerable obstacle to addressing the underlying causes of vulnerability. Coordinated efforts amongst the humanitarian community is particularly crucial in the context of Myanmar, due to the demonstrated resistance of the government to international assistance, its lack of experience responding to a disaster of this magnitude, and the threat of misappropriation of aid.

Recognising the ad-hoc nature of many international responses to humanitarian emergencies, the Emergency Relief Coordinator commissioned an independent review of the global humanitarian system in 2005. This resulted in the development of the "Cluster Approach" which aims to ensure sufficient global capacity, predictable leadership, strengthened accountability and improved strategic field-level coordination and prioritisation. It stresses the need to clarify the division of labour among organisations and to better define their roles and responsibilities within the different response sectors. The Cluster Approach is designed around the concept of partnerships between key players including UN agencies, the International Red Cross and Red Crescent Movement, international organisations and NGOs. By working together in a more structured and professional manner towards agreed common humanitarian objectives both at the global level (preparedness, standards, tools, stockpiles and capacity-building) and at the field level (assessment, planning, delivery and monitoring), better

partnerships with host governments, local authorities and civil society can be achieved. A 2007 review of the Cluster Approach concluded that “the costs and drawbacks of the new approach are exceeded by its benefits for sector-wide programming”, that it “has begun, slowly, to add value” and thus “merits continuation and expansion”.

- Second, **longer-term sustainability needs to be emphasised**. Sympathy for the people affected by the 2004 Tsunami resulted in an unprecedented generosity of donations to humanitarian organizations and from governments and the international community. Due to the severity of Cyclone Nagris, and the media coverage over the apparent reluctance of the junta to accept offers of external support, donations are also likely to be high for this event. Whilst the destruction caused by a major event can set back the economic development of a poor country such as Myanmar years if not decades, the rapid arrival and extent of funds provided for humanitarian aid has the potential to considerably influence development for years to come. It is thus important that reconstruction efforts are prioritised in a fair and impartial manner based on the needs of the most vulnerable. Organisations are increasingly recognising the importance of balancing short-term relief and recovery efforts with the need to build societies that are more equitable, sustainable and resilient to future environmental risks. To this end, there is a need to balance relief and recovery efforts aimed at addressing both short and long-term issues.

However, the organisations best equipped to support immediate relief efforts and longer-term recovery and development should consider carefully any decision to take on a role broader than that stipulated by their mission. For example, after the 2004 Tsunami, several organisations traditionally involved in post-disaster relief operations felt compelled, based on considerable public donations to them, to take on a longer term development role as well. Other humanitarian agencies were already moving in this direction prior to the Tsunami recognising the disconnect between relief and development, and the need to take innovative approaches to reduce the global rise in the humanitarian costs of disasters. Such a change in direction led to upheaval within these organisations as longer-term development perspectives require different modes of operation, different expertise and a longer retention of staff; this resulted in delays in the provision of support. It is likely that these organisations would have served donors and affected communities better by establishing alliances with those specialising in longer-term support and capacity building, rather than trying to take it on themselves.

- Third, there is **the role of coastal buffer zones**: The importance of coastal ecosystems (such as mangroves) in protecting against the physical forces of storm surges and tsunamis, and providing diverse livelihood alternatives, has been highlighted by many researchers, and some organisations are already calling for the establishment (or re-establishment) of coastal greenbelts along low-lying coastal areas in Myanmar. The positive role played by vegetation is gruesomely evidenced in the wounds on the arms and torsos of cyclone victims who were only able to survive the fierce



winds and storm surge by holding onto coconut palm trees for hours.

Studies after the 2004 Tsunami indicated that, apart from the areas closest to the earthquake epicenter where the waves were of considerable force, where extensive stands of mangroves were present, they played a positive role in buffering inland areas by reducing the energy of the incoming waves. Similar observations were made in Bangladesh where the 1991 cyclone resulted in over 140,000 fatalities and widespread devastation. Since then, mangroves have been planted to serve as a natural barrier against storm surges. Effective emergency response (evacuation) and mitigation techniques (mangrove cyclone walls) proved successful in reducing the loss of life and damage when Cyclone Sidr subsequently struck Bangladesh in November 2007. The response to Cyclone Sidr was also supported by improved disaster preparedness and early warning systems.

Like Bangladesh’s coast, Myanmar’s Irrawaddy Delta is a highly vulnerable low lying and densely populated coastal area. Its flat, agricultural landscape provides scant protection against storm surges in the event of a cyclone. Since the 2004 Tsunami, Thailand and Vietnam have also given increased attention to the planting of mangroves as a measure to protect against coastal hazards and sea-level rise. Mangroves are now widely recognised as a disaster risk reduction option and replantation programmes have been initiated across Asia.

However there are issues which need to be carefully considered before embarking on such responses:

- ◆ The role of coastal vegetation in reducing the impacts of a major event is contested; their effectiveness depends on their quality, species diversity, density and extent, as well as the scale of the event. Continued scientific assessment is necessary to better understand the contribution of coastal buffer zones to disaster risk reduction. Mangrove establishment is not the only solution to reduce hazard vulnerability, but must be seen as part of an integrated disaster risk reduction strategy that also addresses disaster preparedness and early warning systems.

- ◆ The establishment of coastal buffer zones also often requires re-zoning of coastal areas, which can have profound implications for local communities in terms of access to and use of ecosystem goods and services, disenfranchising established communities. In Sri Lanka, the government realized that the post-tsunami decision to create a 100-200m wide coastal setback resulted in delays in re-housing people, exploitation of those with coastal land by unscrupulous property developers and tourism companies, and the resettlement of people dependent on access to marine resources to inland areas without the provision of alternative livelihood sources. As a result, the Government reversed the decision to establish a coastal buffer zone.
- ◆ Planting mangroves is not always easy or environmentally appropriate. Mangroves are highly sensitive to soil, topography and other physical conditions. Because of this many plantation schemes have failed in areas where they have been newly introduced. In some environments where mangroves exist, detrimental longer-term biophysical consequences can occur through overgrowth. For example, in Sri Lanka, it has been shown that extensive planting of mangroves in lagoon areas has led to an overall reduction in fish productivity. Mangrove plantations are also frequently monocultures with relatively few benefits for supporting vital ecosystem biodiversity. Consideration should thus be given to coastal revegetation with other species in areas where mangroves do not naturally occur.
- Fourth, **access to credit needs to be easy**. An almost universal criticism of those affected by disasters is the difficulty survivors face in gaining easy and quick access to even relatively small amounts of credit. State, private and even NGO credit services often require the completion of detailed forms by people still traumatised by events and documentation (passports, birth certificates, deeds) that has been destroyed. Experience tells us that one of the keys to a rapid recovery is to help people help themselves. Lack of credit availability is frequently a major hindrance to those trying to get on with re-establishing their routines and livelihoods after a disaster. For them, common sense and pragmatism are the order of the day. Clearly, the current focus must remain on trying to enable immediate relief to reach those in need, while keeping in perspective mid-term and longer-term issues.
- Fifth, efforts should **focus on those most severely affected** by this disaster and most vulnerable to future hazards. To ensure aid is prioritised for and reaches those most severely affected by this event rigorous vulnerability assessments are required to properly inform and direct future reconstruction efforts in a fair, transparent and impartial manner. People's own capacities should be built upon to ensure they are central to decision making and future development pathways. Consideration should also be given to those vulnerable to future hazards, to resolve issues of equity between affected and non-affected communities.

### *The way forward*

While we cannot change the frequency or severity of natural events, there are valuable lessons that relief and development agencies and the communities hit by previous disasters can share so as to better support the survivors of Cyclone Nargis. While urgently addressing immediate needs, ongoing assistance is well advised to prioritise long-term capacity to prevent the type of devastation that has occurred as a result of Cyclone Nargis.

Developing an improved understanding of how best to respond to environmental hazards requires a synthesis of lessons learnt. Whilst this might seem to be an obvious conclusion, the reality is that the increasing impacts of natural disasters and the politics of aid demonstrate our limited ability to take stock and to adjust our practices. Thus, the lessons about improving collective action between different actors; developing approaches that balance short-term humanitarian relief with medium and long-term sustainability considerations; re-examining the role of coastal buffer zones; and improving the targeting and self-help capacities of those affected through the establishment of simple and easily accessible micro-credit schemes, are slow to be learnt. But these collective experiences are crucial in shaping future disaster risk management and crisis prevention efforts to ensure that the results are equitable, sustainable and more resilient to future events.



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