

Sink or Swim

Why disaster risk reduction is central to surviving floods in South Asia

12 August 2007

'One flood means that development goes back six steps in Assam. If you have progressed 100 per cent then the flood means you go back 600 per cent'.

— Ravindranath, February 2007, Director, Rural Volunteers Centre, Oxfam partner in Dhemaji district of Assam in India which witnessed severe floods in 2001, 2003, 2004 and again in 2007¹

Déjà vu

June to October – the months of monsoon rains – is the typical disaster season in South Asia.² The year 2007 is proving to be no exception. News broadcasts predictably cover the millions who have been affected by the floods as shanty dwellings collapse, school buildings crumble, roads get waterlogged, standing crops get swept away, women, men, and children are marooned without food, water and sanitation, and families are forced to migrate in distress. An estimated 20 million people have been affected in two-thirds of Bangladesh, low-lying Terai regions of Nepal, and vast stretches of the Gangetic plain in Eastern India.³ In some areas, the scale of the devastation in 2007 is truly unprecedented.

While floods are not new, erratic weather patterns wreak havoc. In 2007 the early arrival of the rains, their severity, and the continuous three-week spell have caused widespread misery. *Bonna* (large floods) in 1998 and 2004, which caused massive devastation in Bangladesh were also unwelcome disasters. Farmers, however often choose to live even in the flood-prone *char* and *haor* areas of Bangladesh because of the annual *borsha* (rain and inundation), which deposit rich silt on their farmlands and increase crop productivity to such an extent as to make them a lifeline.⁴ The most

vulnerable, including the landless, often have few other options but to live on these fragile habitats where the line between nature's bounty and fury is thin.

Implementation of flood control measures in themselves sometimes proves ineffective and exacerbates the problem. In Rupandehi and Nawalparasi districts of Nepal, wrongly designed culverts and embankments have been reported as a major cause of floods in recent weeks as they obstruct the flow of water. In the last fifty years in the Indian state of Bihar, the construction of 3430 km of flood-control embankments has ironically increased the flood-prone area from 2.5 million hectares to 6.9 million hectares.⁵ While large funds are routinely allocated for maintenance of embankments, implementation is often lax.⁶ As a result, in the last month alone, it is estimated that 75 embankments have breached in Bangladesh⁷ and around 90 in Bihar alone.⁸

Embankments not only increase flood risk in downstream areas, between embankments, but even in 'protected' areas due to the risk of breaching of walls. They prevent both rivers from overflowing their banks and discharge of floodwaters into rivers. Oxfam Programme Manager in East India, Lalchand Garg, categorically states, 'Embankment breakage has been the major reason for the flood. Major governance issues around the maintenance of embankments, and whether they are the solution at all, are an essential public debate'.

Disasters discriminate

'We have been homeless five times due to river erosion and floods. Flood wasted away my home and all household resources. During the floods we took shelter in the embankment and starved for days'.

Parboti Rani, woman in char area affected by the Bangladesh floods in 2004⁹

The history of disasters in South Asia reveals some persistent trends. People living in poverty are the hardest hit by disasters. The mud houses of the poor are the first to be washed away. Lower income groups invariably suffer the most from Bangladesh's annual floods. In the year 2007, it is no coincidence that the flood-affected Indian states of Bihar and Uttar Pradesh and Terai region of Nepal, which lie at the bottom of the pile in terms of poverty indicators, are struggling the most to cope.

Natural disasters often reveal underlying social inequities. Marginalised communities face greater vulnerability to floods. While in Bihar the government has reportedly announced compensation packages for farmers, the landless agricultural labourers who depend on their daily wages for survival are yet to be provided succour.¹⁰ Poverty not only makes people more vulnerable to disasters, but repeated shocks lead people into a downward spiral of chronic poverty.

In South Asia women are particularly vulnerable. In the 1991 Bangladesh cyclone four times more women died than men.¹¹ After the 1998 floods in the country, there was a perceptible increase in chronic energy deficiency (CED) as an indicator of malnutrition among women.¹² When women are displaced and live in densely populated camps

surrounded by water, defecation and personal hygiene are a challenge. Relief efforts, often targeting the 'head of the house' have a blind spot in recognising women's roles as fisherwomen or farmers.

Preparedness is the only long-term solution

'Previously we just reacted. We'd work together, but now we plan before the flood happens. It's meant that, for example, we didn't have to leave this place this year. Before the flood came every family had dried food and a portable oven stored. Cattle were moved and placed in a safe place. When we saw that the tube well was going under water we started to store water in pots. We don't have to wait for outside help.'

Hawa Parvin, Village Disaster Preparedness Committee,
Kurigram district, Bangladesh, 2004¹³

Preparedness saves lives, while equitable humanitarian interventions restore the dignity of the affected people. In 2007, 250 families in the *char* areas of Gangachara upazila in Bangladesh have been saved and their houses shielded from severe flood damage due to preventive steps by Oxfam partner NGO, Social Equality for Effective Development (SEED).¹⁴ A special bean crop has helped women earn money when the paddy crop has been washed away because these beans grow around the frame of their raised homesteads and are harvested during the flood season. In pockets of Assam and Bihar, contingency food stocks stored prior to the floods have helped villagers survive the first critical 48 hours, which is how long it takes for the first aid to ideally reach a flooded village. Seed banks have helped restore their livelihoods.

Preparedness costs a fraction of what the response costs. But it requires attention and commitment during 'peacetime'. In Assam, Oxfam partner Rural Volunteers Centre in Dhemaji district has demonstrated in earlier floods that community-based disaster preparedness costs a mere two per cent of projected post-flood relief. In Bangladesh during the 1998 floods, the construction cost of each flood shelter was only one-fifteenth of the price of every cow saved.¹⁵

Infrastructure not embankments

Physical structures need to be prepared to withstand the onslaught of disasters. People living in poor shanty houses are more vulnerable to the ravages of a flood than the owners of concrete or raised houses. For the last decade Oxfam in South Asia has systematically supported investments in reducing the risk of disasters. In Bangladesh, Oxfam partner Amra Kach Kori (AKK) in Faridpur district, has reported that 451 families have evacuated to six flood shelters built before the floods. In Madhubani district of Bihar, 1500 families have moved to four flood shelters. Government officials have requested use of the Madhubani partner's (Bihar Sewa Samiti) motorised boats to support rescue operations and distribute dry food rations from its stocks. Raised homes in Nepal and India were not flooded in 2007.

Investment in basic services – healthcare, food, water and sanitation – is also critical to saving lives after a disaster. Tubewells that had been raised prior to the floods in Madhubani district in Bihar and the Terai region of Nepal have proved invaluable for

affected families to obtain safe drinking water. In the Rupandehi district of Nepal, Oxfam partner, Centre for Disaster Management, in collaboration with the government, has invested in building a safe birth delivery centre adjunct to the local primary healthcare centre in the flood-prone areas to support communities marooned more than 45 kilometres from the nearest town.

Prepare communities

Community solidarity is an under-appreciated disaster protection measure. Local residents are the first and last responders to a disaster. Building their resilience is fundamental to ensure they are not reduced to disaster victims. Children's task-force committees created across 150 schools in the Dhemaji district of Assam have equipped them to provide first aid instead of plunging into trauma in the aftermath of a disaster. In the last week, in four blocks of Madhubani district in Bihar which have not received any government support, village disaster management committees have used their revolving funds to purchase dry food locally. Oxfam's partner NGOs are also ably implementing purification activities in stagnant water tanks.

Prior to the floods, Oxfam partners have encouraged local community based disaster committees to produce hazard and vulnerability maps with evacuation plans in the true spirit of self-reliance. Simulation training sessions in rescue measures have been imparted. In Nepal, Oxfam had supported first-aid training sessions to enable people to be better prepared to cope with disasters.

Lives lost in disasters are usually popular media stories and they need to be told. But in 2007, even after three weeks the floods have barely made it to the front pages of the national newspapers. In comparison, even a single day of floods in the cities of Mumbai, Dhaka or Gloucester clock in endless hours as 'breaking news' on television screens. There is also a crying need for news reports to provide equitable coverage, focus on positive examples of lives saved in disasters through preparedness and keep the pressure on the government to invest in simple, cost-effective and secure ways in which the poor can cope with the floods.

Scaling up disaster preparedness and mitigation requires concerted government action and political will. Oxfam partners across the affected areas are collaborating with government agencies, but during these floods it has become painfully evident how much more needs to be done to integrate the considerable resources of governments with the objective of greater disaster preparedness. For example, as millions go hungry, governments and policy makers must ensure a swift response, but they must also reflect on whether contingency stocks and existing public distribution systems could have been better deployed to prevent suffering. And in another example, in India, the government programme Indira Awas Yojana (IAY), specifically targeted to construct houses for families below the poverty line, offers the ideal opportunity to raise the plinth of houses in flood-prone areas at a meagre additional cost.

Recommendations: Living with risk

The sinking feeling of floods has revisited South Asia. The United Nations has described the 2007 floods in India as 'the worst in living memory'. The time is ripe for change. Governments and donors in South Asia need to invest in reducing the risk of disasters as a long-term cure to chronic floods:

1. **Implement decentralised contingency plans:** In flood-prone areas across South Asia, all panchayats and districts should have boats and buffer emergency food available within the public distribution system. Based on SPHERE¹⁶ standards, contingency stocks need to be made available at a sub-district level.
2. **Maintain existing embankment to avoid breaches but fresh investment in dams and embankments as flood control measures should be avoided:** Investment in rejuvenation of local water systems and proper drainage systems, with community participation, as part of all infrastructure development (roads, railways, urban development, etc) works better.¹⁷
3. **Build the preparedness capacities of communities:** In chronically flood-prone areas, communities need to be equipped with life-saving preparedness skills e.g. first-aid, community contingency planning, early warning systems. Evidence from Oxfam experience shows the effectiveness of community-based disaster preparedness. However, unless governments at both the national and local levels work with communities to ensure wide scale implementation, the effectiveness will be limited.
4. **Invest in community assets:** Across the flood-prone areas in South Asia, large-scale investment in community-based preparedness infrastructure assets is required e.g. flood shelters, raised homesteads, motorised boats, raised cluster villages. Basic services of food, health care, water and sanitation provided through grain banks, public health centres, raised tube wells, raised latrines etc also require special attention.
5. **Mainstream disaster risk reduction:** Long-term vision, effective policy-making and multi-stakeholder co-ordination to tackle recurrent disasters are essential. In Nepal, in particular, the amendment of the National Disaster Relief Act, 1982 is recommended on the lines of the model Disaster Management Act produced by Oxfam and Nepal Centre for Disaster Management. All development investments e.g. construction of bridges, roads, culverts and causeways should also be made disaster resilient. Apart from specific disaster risk reduction policies, all government line ministries need to incorporate and fund disaster preparedness plans for their existing areas of work.
6. **Donors need to invest more resources** to build resilience of local communities and governments: While DFID has made an initial commitment to allocate ten per cent of its total budget for specific emergencies to disaster risk reduction,

the House of Commons has recommended that it be extended to their total humanitarian budget.¹⁸ ECHO also has a specific DipECHO programme¹⁹ devoted to disaster preparedness. Other donor agencies should follow their lead.

Notes

- ¹ Ravindranath (2007), Correspondence with author on 12 February 2007
- ² South Asia is the world's most disaster affected region. Forty three per cent of people affected by disasters between 1975 and 2005 live here. Floods wreck the maximum havoc with 40 million hectares across South Asia being vulnerable. EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université catholique de Louvain - Brussels - Belgium
- ³ United Nations estimate quoted in BBC, 2007, *Devastating floods hit South Asia*, BBC News, 3 August 2007 http://news.bbc.co.uk/1/hi/world/south_asia/6927389.stm (last checked 7 August)
- ⁴ Shaw R (1989), Living with Floods in Bangladesh, *Anthropology Today*, 5 (1): 11-13
- ⁵ Misra Kumar Dinesh (2007), *Bihar's Embanking Mindset*, Analysis, Himal South Asia, August
- ⁶ Thakkar Himanshu (2006), *What, who, how and when of Experiencing Floods as a Disaster*, South Asia Network on Dams, Rivers & People http://www.sandrp.in/floods/HT_Paper_1106.pdf (last checked 9 July)
- ⁷ Morshed, M (2007), World Food Programme, Correspondence with authors
- ⁸ Binod Kumar, Bihar Sewa Samiti, Madhubani – Oxfam's partner, Correspondence with author on 11 August 2007
- ⁹ Woman in char areas supported by Oxfam partner organisation People's Oriented Program Implementation
- ¹⁰ Sahay A.M. (2007), Floods: Helpless Bihar seeks PM's help, <http://www.rediff.com/news/2007/aug/06bihar.htm> (last checked 6 August)
- ¹¹ UNEP (2004), *Global Environmental Yearbook 2004-5: An Overview of Our Changing Environment*, Nairobi: United Nations Environment Programme.
- ¹² del Ninno et al (2001) *The 1998 Floods in Bangladesh: Disaster Impacts, Household Coping Strategies, and Response*, Research Report 122, Washington DC: International Food Policy Research Institute
- ¹³ Correspondence with Jane Beesley, Oxfam GB, Emergency Flood Response Programme 2004 (Kurigram and Sirajgonj)
- ¹⁴ Hossain Zakir (2007) Preventive step shields flood-hit char people, *New Age*, 7 August
- ¹⁵ DFID (2002), *Disaster Risk Reduction A Development Concern*, London: Department for International Development
- ¹⁶ The Sphere Project was launched in 1997 by a group of humanitarian NGOs and the Red Cross and Red Crescent movement which includes the Sphere Humanitarian Charter and Minimum Standards in Disaster Response. This handbook sets out what people affected by disasters have a right to expect from humanitarian assistance. The aim of the project is to improve the quality of assistance provided to people affected by disasters, and to enhance the accountability of the humanitarian system in disaster response. See: Sphere (2004) Sphere Humanitarian Charter and Minimum Standards in Disaster Response, Sphere Project, available at: <http://www.sphereproject.org>
- ¹⁷ South Asia Network of Dams, Rivers and People, <http://www.sandrp.in/> (last checked 12 August)
- ¹⁸ International Development Committee (2007), *Humanitarian response to natural disasters: Government Response to the Committee's Seventh Report of Session 2005–06*, Second Special Report of Session 2006–07, House of Commons, London: The Stationery Office Limited
- ¹⁹ The European Commission's Humanitarian Aid Office (ECHO) had created a specific programme DipECHO (Disaster Preparedness ECHO) a decade ago to mainstreamed disaster preparedness

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