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## Preparing for disasters

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Oxfam's latest report, 'Rethinking Disasters', recommends the integration of disaster risk reduction into sustainable development policies and planning, as well as strengthening institutions that help communities build greater resilience to disasters

Ten thousand people died in the Andaman Islands during the 2004 tsunami, but the Onges tribe that has inhabited the island for the last 50,000 years remained unscathed.

When the first wave hit them with increased intensity, they were able to distinguish its amplitude and frequency from the normal tidal waves and immediately moved to the highlands where they survived by eating wild boar instead of their favourite turtle meat.

Their advanced knowledge of the ecosystem is transmitted orally from generation to generation. But this cannot be said for other communities that have been unable to build up indigenous mechanisms to cope with disasters.

Vulnerable groups, including the poor, marginalised minorities, and women continue to bear the brunt of natural disasters. Oxfam's recently released report titled 'Rethinking Disasters' (2008) highlights how when a natural disaster strikes in South Asia more women die than men.

Of the 75,000 people who perished in the Kashmir earthquake, a large number were women. The 1993 Latur earthquake revealed a similar gender bias. The earthquake measured only 6.3 on the Richter scale but it decimated more than 1,500 flimsy houses.

In the worst affected tsunami districts of Nagapattinam and Cuddalore, in Tamil Nadu, twice as many women died as men. In Batticaloa district in Sri Lanka, four-fifths of those who died in the tsunami were women and children, according to statistics collected by the Sri Lankan government.

The Oxfam report stresses that since women are the primary homemakers in South Asian families, when a disaster like a tsunami or an earthquake strikes they are more

likely to die because they are generally found working at home or taking care of the children and the elderly.

Investigations by the state government have shown that one of the main reasons why so many women died during the tsunami in Tamil Nadu was because a sense of shame kept them from running to the safety of the shore when the waves ripped apart their clothing. In Nagapattinam, the inability of women to swim proved fatal; mortality rates among those who were able to swim were 60% lower.

The fact that women are the worst casualties of disasters is also borne out in the extended drought that has hit Rajasthan in the last decade. Oxfam, which works with several NGOs on the ground, found that 82% of women were eating less this last decade, when the drought was at its peak.

The extended drought has also affected thousands of farmers in Gujarat. The report cites the example of Hiri Ben from Gajjuvandh village in Gujarat who has to walk long distances to fetch water. "Because I have to fetch water four to five times a day I can't go to work. My husband goes to work, but I cannot go. And since we are earning half of what we were earning earlier, I am eating half of what I used to eat before," she confesses.

The report emphasises that when disaster strikes, socially marginalised groups, including dalits and Muslims, face increased discrimination. In western Rajasthan, the report points out, dalit houses were located in sand dunes up to nine kilometres away from revenue villages, at the tail end of drinking water supply schemes.

The story was the same in Gujarat when, following the 2001 earthquake, dalits and Muslims in the towns of Anjar and Bachchau did not enjoy the same access to shelter, electricity and running water that was available to higher caste Hindus. More recently, in the 2006 Rajasthan floods, dalits were asked to leave the relief camps for fear of polluting others.

Disasters are known to aggravate discrimination. In the aftermath of the tsunami in Tamil Nadu, there was blatant discrimination against dalits in the provision of relief, removal of bodies and refusal to share emergency shelters.

One of the main reasons why the 2005 Kashmir earthquake left more than 600,000 families homeless was because of poor quality construction material. Several school buildings collapsed leaving 18,000 students dead. The report explains how indigenous knowledge has often provided solutions to building problems. In the Uttarkashi earthquake, in 2000, traditional wood and stone houses were still standing even as modern buildings collapsed. Similarly, during the Kutch earthquake, the Bhunga

circular houses with thatched roofs suffered minimal damage. In the northeast, houses built on bamboo stilts allowed the floodwaters to flow under them.

Floods continue to render more and more people homeless across South Asia. Expenditure on flood control may be rising, but so is the damage. Experts feel that governments' insistence on embarking on huge projects to control flooding has only exacerbated the situation.

The report reveals how the Bihar state government has increased its flood control embankments by 22 times. But the area that is prone to flooding has simultaneously increased an astounding 300 times! Embankments increase the flood risk not only in downstream areas between embankments but also in protected areas, if the walls are breached. As water levels rise and embankments are breached, standing crops, homes and lives are all swept away.

Most of these mega projects are being financed by the World Bank and the Asian Development Bank. The report stresses that rather than investing in huge projects and forcing an engineering solution to control nature, local communities should be empowered to restore local water systems and natural drainage, harvest rainwater and adopt sustainable adaptation techniques.

At the other end of the spectrum is the situation in the Bundelkhand region where NGOs have reported that villagers are being forced to eat *chapattis* made out of grass. Debt and five years of crop failure have driven over 400 farmers to commit suicide in Bundelkhand. Indiscriminate tree felling, overexploitation of groundwater, excessive use of chemical fertilisers, soil erosion and scanty rainfall have all contributed to this situation. An elderly farmer in the area was quoted as saying: "When I was young there were a lot of trees around here. But now the trees have gone and the prices of vegetables have shot up."

This disaster was made worse by the fact that traditional tanks and ponds had fallen into disrepair, and more and more people were using tubewells and handpumps. They were also growing water-intensive crops.

Climate change has left the entire swathe of South Asian nations, especially India, extremely vulnerable. The first step towards risk reduction is to understand the kind of threat that is being posed by various hazards, be they floods, earthquakes or drought. The threat must be analysed by repeated brainstorming sessions involving the entire community.

Oxfam, which works alongside several NGOs, has been encouraging disaster committees to produce hazard and vulnerability maps, including evacuation plans.

These help save lives, homes and livelihood assets. The report cites the example of one such disaster-preparedness effort committee set up in Andhra Pradesh, in which groups of 15 families were selected to work towards disaster mitigation. Community solidarity helped build their resilience and ensured that they did not remain merely passive victims. They were taught to swim, to be in constant touch with each other, and to rush to shelters at the first signs of an impending cyclone so as not to be swept away. These may be small interventions, but they play a crucial role in saving lives.

The 2007 floods in South Asia affected 30 million people. This year, the flood situation is much worse.

Between 2% and 6% of South Asia's GDP is being lost to disasters. Two-thirds of these disasters are climate-related; global warming will only increase their frequency, severity and unpredictability. Experts warn that increases in temperature will cause sea levels to rise dangerously, threatening coastal areas with flooding, and drinking water sources with saltwater contamination.

'Rethinking Disasters' recommends the integration of disaster risk reduction into sustainable development policies and planning, as well as strengthening institutions that help communities build greater resilience to disasters. Only by doing this, and by working closely with agencies across the globe that are working in this field, can strong steps be taken to minimise the fallout of disasters.

**InfoChange News & Features, August 2008**