



## SOUTH/SOUTHEAST ASIA & EAST AFRICA: EARTHQUAKE AND TSUNAMIS

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### Disaster Risk Reduction in Reconstruction:



A sign highlights a tsunami evacuation route to local residents in a housing reconstruction site in Gugop village, Pulo Aceh, Indonesia. The British Red Cross-supported project is one of the many International Federation initiatives to reduce disaster risks. International Federation/ Vina Augustina.

Reconstruction can sometimes seem a simple process of rebuild homes and infrastructure as fast as possible. However, such a one-dimensional approach is not enough. Rebuilt houses can be torn down by the next disaster. Lives can be lost when, despite the presence of stronger buildings, people do not know how to protect themselves or react to an imminent disaster. Communities already battling health risks are made doubly vulnerable when natural catastrophes strike.

Simply put, recovery efforts that fail to address the ongoing vulnerability of communities to natural hazards are at best, missed opportunities, and at worst, negligent.

In the tsunami-affected countries, the International Federation recognizes that resilient homes in safe locations complimented by resilient communities are central to success in any recovery operation. This realization is encapsulated in the Tsunami Regional Strategy and Operational Framework and on a wider scale, the International Federation's first Global Agenda goal to reduce the number of deaths, injuries and impact from disasters.

At the project level, this has resulted in the incorporation of disaster risk reduction into a range of tsunami recovery efforts. In the context of reconstruction, while acknowledging the "building back better" agenda, the Red Cross Red Crescent prioritizes the alignment of its work with national priorities and local hazard standards. Community participation is also a key element in many of the reconstruction projects. These approaches ensure that projects are sustainable locally, as unequal standards can sometimes lead to inter-community tensions, while communities that are involved in the rebuilding process are more likely to understand the importance of and maintain the structures better.



Across Indonesia, the Maldives and Sri Lanka, the International Federation is building or contributing to the construction of close to 47,700 permanent houses, of which 12,850 are completed and 20,750 under construction (figures are as of April 2007). Red Cross Red Crescent partners are also providing families with approximately 21,200 transitional shelters, 86 per cent of which are now built.

Reconstruction is not just limited to homes. Apart from ensuring that more than a million people will have access to improved water or sanitation services, the reconstruction or rehabilitation of 334 health facilities and 96 schools is also ongoing. Importantly, in countries such as Indonesia and Maldives, 100 per cent of permanent houses, shelters and schools built adhere to local hazard resistance standards.

### **Sri Lanka: restoring coping mechanisms while rebuilding homes**



Sturdy and durable structures that come equipped with water and sanitation facilities are a feature of Red Cross Red Crescent-built homes. International Federation.

can surface because of disasters. Lessons learnt from housing projects to date in Sri Lanka have shown that water and sanitation needs for some reconstruction communities are not addressed adequately. This is not only due to a lack of funds and capacity to deliver services, but also because communities with limited hygiene awareness have not put forward demands to improve the situation.

To review the existing infrastructure, the International Federation has completed a water and sanitation audit on most reconstruction sites earmarked for Red Cross Red Crescent grants. Workshops in Ampara district, home to a large part of the reconstruction programme, train participants on designing septic tanks, soak pits and ecological sanitation toilets. In order to reduce risks of outbreaks of possible diseases, another series of workshops focus on raising awareness of waterborne diseases and on conducting outbreak investigations.

Tsunami devastated coastal communities that are part of the tsunami reconstruction programme are still struggling to resume their normal life in the face of losses in natural, physical, financial and human capital. To address this, public education and advocacy about hazards and livelihood support programmes are carried out simultaneously with the reconstruction process to help beneficiaries diversify incomes and reduce future risk. Community participatory assessments direct integrated interventions that benefit the community as a whole, while addressing specific needs of vulnerable individuals or groups.

### **Indonesia: an integrated approach to community-based risk reduction**

In Aceh, Red Cross Red Crescent partners have developed a shared approach, known as integrated community-based risk reduction that ensures risk reduction is considered in all reconstruction projects and in the planning of community settlements. Communities first become aware of potential risks by identifying

Housing reconstruction is currently the International Federation's largest programme area in Sri Lanka, and the area where integrated disaster risk reduction measures have progressed the furthest. The Sri Lanka Red Cross-led effort goes beyond merely restoring the situation that existed before the tsunami, and instead aims to help communities develop appropriate coping mechanisms and infrastructure that can help reduce the impact of disasters. The standard design of houses in the reconstruction programme is devised to address local climate issues and risk to natural hazards. Indeed, this is evidenced in the reconstruction guidelines from the National Housing Development Authority of Sri Lanka.

The International Federation ensures that any dwelling included in the programme has proper facilities to prevent water-related diseases that



the hazards, vulnerabilities, risks, capacity and mitigation measures in their villages before and after the tsunami. Community-based action teams made up of village volunteers and representatives then proceed to plan their respective villages with an eye on mitigating the impact of potential disasters.

To build awareness on disaster preparedness among schoolchildren and teachers, a disaster mitigation programme complements the ongoing rehabilitation and reconstruction of their schools. Schoolchildren take part in activities such as mock exercises, classroom lessons and watching short films that relay relevant messages. Teachers in particular play a crucial role in maintaining the mitigation activities, keeping their students constantly aware of the importance of preparedness.



These women from a community-based action team are planning secure homes and village sites as part of a training provided by Danish Red Cross in Alue Ambang, Indonesia. International Federation/Vina Augustina.

### **Maldives: building safer structures in a unique environment**

As a low-lying archipelago that is 99 per cent sea and often drenched in torrential rain, it is essential that any structures built in Maldives have to be safe from floods and other water-related disasters. This fundamental premise informs the International Federation's tsunami recovery work across the country.

Recent progress in housing construction is encouraging. Over 75 per cent all the houses committed are now completed or under construction. All of these houses meet or exceed local hazard standards. In order to reduce risks further, many of the houses are raised above ground level. This makes them more resistant to flooding, a recurrent event in the Maldives. The houses also have seismic resistant structures and ceiling storages to keep items dry and safe.

Reconstruction work on some islands goes well beyond simply providing housing. Hospitals, schools and community centres are also being built across Maldives. Apart from being functional spaces for communities, many of the buildings have an additional purpose: they are often multi-storey buildings and can serve as safe havens for people in times of disasters.

A good example is the Federation Secretariat constructed and Bahrain Red Crescent funded accommodation building for the Home for People with Special Needs. The building has a special design, which provides refuge during disasters such as tsunamis or floods. The accommodation building stands on pillars, making it less vulnerable to high sea water levels. The design also includes a ramp, which allows people with physical disabilities to access the elevated floor. The building was completed and handed over to the management of the Home in early June and now accommodates 32 residents.



This home for people with special needs is designed to withstand floods and high sea water levels. International Federation/ Valpuri Saarelma.



## Operational Highlights

### In Sri Lanka:

- By the end of April 2007, almost 80 per cent of the International Federation's post-tsunami housing programme was either underway or completed. To date, the local national society and other Red Cross Red Crescent partners have built or co-financed the completion of 8,146 homes, while a further 12,852 are at various stages of construction.
- The International Federation<sup>1</sup> has joined forces with the World Bank/International Development Association and the United Nations Human Settlements Programme through a partnership, which assists the government in providing financial support for owner-driven housing reconstruction.
- The International Federation is supporting the government to rebuild health clinics and hospitals, and provides equipment and training to medical staff. As of June 2007, 16 health infrastructure projects are completed and handed over, 35 are underway, and a further 24 sites are planned.
- Heavy rains washed over the Colombo and Galle districts in May. The resultant floods left eight dead and affected around 30,000 others. The Sri Lanka Red Cross Society and partners responded quickly, carrying out needs assessments and assisting 10,000 people.
- The International Red Cross and Red Crescent Movement and other humanitarian organizations were shocked and saddened by the abduction and killing of two Sri Lanka Red Cross Society staff in early June. Both men were in Colombo attending a training workshop when they were abducted from the railway station on their way home to Batticaloa, and were later found dead.

### In Indonesia:

- The integrated community-based risk reduction programme is ongoing in Banda Aceh, Sabang, Aceh Besar and Aceh Jaya districts and will be extended to the districts of Aceh Singkil and Aceh Tengah. It is supported by the Indonesian Red Cross Society and four partner national societies.
- Of the 20,000 transitional shelters that will be provided to affected families, 87 per cent are complete as of June 2007.
- The International Federation is also providing 19,942 permanent houses to tsunami-hit families in Aceh. As of April 2007, up to 4,395 were complete and 7,088 under construction. All permanent homes and transitional shelters are being built according to local multi-hazard standards.
- The Indonesian Red Cross Society and British Red Cross safer housing project will see the construction of 2,184 houses in Aceh Besar and Aceh Jaya. In addition, the project aims to reduce disaster risks by educating target communities on the principles of building safer structures such as safe locations, strong frames, emergency exits and maintenance. Community participation is high, as communities are thoroughly involved in the project's process. After training, communities apply the said principles to the construction of community centres and public facilities.

### In Maldives:

- The Red Cross Red Crescent is the largest international agency in the country to provide permanent houses to tsunami survivors, having committed to build 1,485 houses for over 7,000 people.
- Construction of community buildings in the Raa Atoll Dhuvaafaru Island has started. A groundbreaking ceremony for a regional hospital in Laamu Gan was held in June.
- German Red Cross has completed its programme to reconstruct and rehabilitate health facilities, with 24 health facilities rehabilitated and functional.
- The Australian and Canadian Red Cross Societies have completed a waste management programme, leaving 77 communities cleaned up and 79 waste management centres. Thousands of community members have also been trained in waste management.
- All of the International Federation's 15 supplementary water supply systems are either complete or under construction, with many of them used by communities during the recent dry season.
- In response to heavy tidal surges and flooding in May, trained Red Cross and Red Crescent community volunteers provided rapid response by building protective sandbag walls and assisting the flood-affected.

**For more details and news stories, photos and all operational updates related to the tsunami, visit:**  
<http://www.ifrc.org/tsunami>

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<sup>1</sup> This includes the Sri Lanka Red Cross Society and seven partner national societies.