

Mangroves and education reduce disaster risk in Viet Nam

Viet Nam is one of the most typhoon-affected countries in Asia. The Red Cross of Viet Nam is working on disaster mitigation strategies that reduce the vulnerability of people prone to multiple weather-related hazards.

The Red River delta, an extensive rice-growing area in the north of the country, is one of the most densely populated regions in the world. Over centuries, the mud-flats of the delta have been reclaimed for agriculture by building dykes. Communities also left a band of natural saltwater-tolerant mangrove forest between the dykes and the sea in order to help protect the rice fields from wave, wind and typhoon damage. However, the cutting down of the mangrove forests for fuel and the spraying of chemical defoliants during the war in the 1970s have destroyed most of this natural protective belt. Some of the dykes were beginning to erode and there was an increasing risk to people and their rice fields.

The government and several non-governmental organizations (NGOs) have been campaigning to reforest the coastlines. The Red Cross of Viet Nam, with support from the International Federation, the Japanese Red Cross Society and the Danish Red Cross, has planted

more than 175 square kilometres of mangrove forest along almost 200 kilometres of coastline.

Mangroves have now been re-established along almost all the coastline where natural conditions allow. Local communities carry out the planting and the planters have the right to harvest marine products – such as mussels and crabs – in the areas where they have been planting for a number of years.

Now that most of the planting has been completed, the Red Cross of Viet Nam is focusing its efforts on dyke maintenance, applying other techniques to inland river dykes and developing new activities to support vulnerable people in the area.

The benefits of the project are significant. In financial terms alone, the mangrove project proves that preparedness and mitigation pay. The planning and protection of 12,000 hectares of mangrove has cost around US\$ 1.1 million, but has helped reduce the cost of dyke maintenance by US\$ 7.3 million a year. The Red Cross of Viet Nam also estimates that 7,750 families have improved their livelihoods, and therefore their resilience to further hazards, through the selling of crabs, shrimps and molluscs.



Yoshi Shimizu/International Federation

Education saves lives

Strange as it may seem, educating schoolchildren about natural disasters was for many years not included in the Vietnamese school curriculum. Even though experience has shown that in this area, information alone is grossly inadequate and that only the in-depth education of the population saves lives on a large scale. It is not enough to know that a typhoon or tropical storm is on its way; it is also vital to understand which preventive measures should be taken and which reflex actions will save lives and property.

A disaster preparedness manual was jointly drafted by the International Federation, the Red Cross of Viet Nam and the United Nations Development Programme (UNDP), with European Union funding. First tested in three of Viet Nam's 60 provinces, it was distributed to children aged 9–12 years, together with a teacher's guide and a useful little gadget: a plastic bag in which parents were invited to preserve their most precious documents in the event of flooding.

The book was crammed full of illustrations, while the subjects covered ranged from the dangers of domestic fires to flash floods.

"The manual was well received, but we took into account the comments of the children and their teachers and we started again from scratch," relates Ian Wilderspin, the

International Federation's disaster preparedness delegate in Hanoi. The new version, clearer and with colour pictures (as requested by the children), was distributed during the 2000–2001 academic year in seven central provinces. The target audience is some 2,000 teachers and 95,000 children in their fifth year of primary school.

Although it is vital to train children, education goes far beyond this. The Red Cross of Viet Nam is aware of the need for greater training of its own personnel – be they volunteers or paid staff. A relatively comprehensive manual is now available to them and this finally enables shortcomings due to language difficulties to be overcome: "There is very little in Vietnamese," notes Wilderspin. Regular training cycles are now being introduced, with the assistance of the International Federation. And Wilderspin is very hopeful that this training can gradually spread beyond the immediate circles of the Red Cross of Viet Nam and of children. "Red Cross trainees are now providing very practical guidelines to the commune authorities about the things to do or not to do in case of disaster," he argues. "We need to shift towards community-level preparedness."

Note: *The first part of this case study first appeared in the International Federation publication 'Disaster risk reduction and the International Federation', 2006. The section titled 'Education saves lives' first appeared in Chapter 5 of the International Federation's World Disasters Report, 2001.*



Planting trees will help reduce the sand drift that threatens the rice crops that so many people depend on for income and food.

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