

3.1 Good Practices in Disaster Management Phases

3.1.1 Prevention/Mitigation

Vietnam

Effectiveness of the Disaster Preparedness Programme in Vietnam: Planting Mangroves to Mitigate Sea Dyke Erosion

The Vietnam Red Cross (VNRC) is a large organization that is considered the core body for all humanitarian work in Vietnam. The Red Cross (RC) structure has four levels: national, provincial, district and commune. Altogether there are 4.7 million members and 2.5 million RC youth and volunteers.

The VNRC has its own statute in line with Vietnamese law and with the Seven Fundamental Principles of the Red Cross and Red Crescent Movement. Since 1990 the VNRC considers disaster preparedness as one of its core tasks with a focus on community-based disaster preparedness (CBDP) (or four spot activities) in order to enhance communities' capacity to be prepared for and respond to disasters. A worldwide approach to disaster management by Red Cross Societies has opened new avenues, from relief and rehabilitation to development work for disaster reduction.

Since 1994 until the present, the Danish Red Cross (DRC) has been supporting the Vietnam National Red Cross in implementing a Disaster Preparedness Programme. Having begun as 'The Coastal Environmental Preservation Programme' in Thai Binh in 1994, the program was extended in 1997 to include the province of Nam Dinh. Phase III, now renamed the Disaster Preparedness Programme and covering 2001–2005, pursued the development objective *'That the vulnerability and suffering of selected communities is reduced, in accordance with the fundamental principles of the Red Cross and Red Crescent Movement'*.

Similarly, the Japanese Red Cross supported a pilot project through the Federation in 1997 covering the five provinces of Quang Ninh, Hai Phong, Ninh Binh, Thanh Hoa and Nghe An. Following the pilot project, the program was continued in 1998–2000 and expanded to Ha Tinh province. Phase III covers 2001–2005 and continues to pursue the development objective given above.

Experiences from Thai Binh and Nam Dinh provinces in 1996 and 1997 proved that mangroves planted by the Red Cross initially for environmental reasons constituted a good green wall to protect sea dykes against typhoon waves. This means no flooding of agriculture fields or settlements. Fishing boats can use mangroves as shelter during typhoons. The number of deaths fell. In 2003, two typhoons struck Northern Vietnam in July and August but only four people died, no rice fields were flooded and the impact of the typhoon rapidly weakened. Research published in 1997 by Japanese scientists demonstrated that a sea wave 1.5 m high is reduced to nearly zero after passing through a 1,500-m wide mangrove plantation. Mangroves are considered to offer effective protection for sea dykes during both typhoons and normal circumstances.

To replant mangroves, the Red Cross has used a community-based disaster management approach. It is an integrated approach whereby the three main components of resources, organizational development and dissemination of new ideas through training and education are integrated in a single program, resulting in a more holistic delivery of services.

The community therefore plays an important role and is actively involved in the implementation. Many training courses and public awareness exercises have been carried out to assist the local community in fulfilling its role, such as planting training courses and DP training courses for teachers, children and local staff.



Sea dykes are protected by mangroves



People collecting sea products for their livelihood

Local communities held competitions to raise public awareness through drawing, drama, folksongs, and so on. The communities protect the mangroves directly by establishing teams of guardians, who take care of the mangroves immediately after planting.

The impact of the program impacts on both the coastal and socio-economic environment is obvious. Confirmation of its effects is mostly based on information and observations from local people and authorities, including the following.

- Increased mud flats and land reclamation.
- Mitigation of dyke erosion (the average reduction in annual expenditure for dyke maintenance is around VND600–700 million VND per kilometer of dyke).
- Socio-economic impact.
- Increased sea product collection (after one morning working in the mangroves, collectors could earn from VND30,000 to VND50,000 from selling baby crab).
- Income generation for planters, guards, and RC and PC officers.
- Better housing environment.
- Emergence of possible livelihood projects.



Mangroves give you a better and safer life

- Background:

Vietnam is located in Southeast Asia. It is a very long and narrow country with a long eastern sea board. Mountains and hills cover four-fifths of the country. The most populated areas in Vietnam are the lowland alluvial plains including the Red River and Mekong River deltas.

Economic activities are mainly agricultural and forestry products, followed by industrial products and services, tourism, etc.

Between four and six typhoons strike Vietnam annually, but this is a variable cycle with fewer typhoons in some years. In 2001 there were three typhoons. This makes forecasting more difficult. The Vietnamese people would not pay sufficient attention to typhoons and the damage caused by a sudden typhoon would be more severe in the absence of continued disaster preparedness activities, especially along the northern coast.

According to recent statistics, more than 6,000 people died and economic losses amounted to approximately US\$2.3 billion in the period 1996–2002, with losses of US\$33.5 million during one nine-month period of 2003.

-Objectives

The main objectives of the Mangrove and Disaster Preparedness Programme are to protect sea dykes and people's lives and property; to build the capacity of the Vietnam Red Cross for disaster preparedness; to improve the coastal environment; and to create jobs and income for vulnerable people.

Main activities are as follows.

1. Planting and protection of mangroves and up-land trees (also for protection purpose).
2. Disaster preparedness training for RC staff, local authority officials at the grassroots level and teachers and children in schools.
3. Capacity-building activities in term of planning and management skills for RC staff.
4. Awareness raising about mangroves and disaster preparedness through events such as planting ceremonies, technical training courses, talks about mangroves painting competitions, drama theatres, workshops, etc, and the mass media such as newspaper, television, leaflets, and speaker systems.
5. Advocacy, including workshops and studies of mangroves by the Mangrove Research Center
6. Providing necessary equipment to the VNRC at various levels.
7. Building and repairing typhoon -resistant houses for vulnerable families since 2002 (in Nam Dinh province only).

-Major Achievements

Program achievements to date are as follows.

1. Over 20,000 ha of mangroves have been planted in eight provinces, which can protect about 200 km of sea dykes (The length of the sea-dyke system is about 3,200 km in Vietnam) mainly using three mangroves species: *Kandelia*, *Rhizophora* and *Sonneratia* spp.
2. Over 10,000 poor households in 95 communes of 28 districts in eight provinces were directly involved in planting mangroves. They earned above US\$20/ha.
3. Over 250 RC staff at district and provincial level were trained in disaster management.
4. 5,122 teachers at primary schools in eight provinces were trained in disaster preparedness, and they in turn trained approximately 200,000 children.
5. The impact and results of the program have been regularly broadcast on television, radio and newspapers, especially through the loudspeaker system at community level
6. 777 strong houses have been constructed and given to vulnerable families

- Total Budget

1994-2004: US\$4.4 million

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