

Mangroves to protect from climate change

With 3200 km of coastline, Vietnam will be among the five most affected countries by rising sea levels. The villages near the coast cooperate to reduce the effects of climate change.



Pham Thi Tuyen and her daughter in front of their destroyed house

The typhoon Damarey hit the coast of Vietnam hard in November 2005. The coastal commune Da Loc was at the centre of the typhoon and its effects disastrous. 6 villages were flooded, 26 houses collapsed and 960 houses lost the roof. 250 ha of land became saline and the total loss assessed to 80 billion dong (around 4.5 million dollars) in this commune alone.

Typhoons are common in Vietnam, but the local authorities in Da Loc were taken by surprise.

“It’s the first time we have had a typhoon with the strength of Damarey. It was serious beyond our expectations,” says Mr. Tran Thang Canh from the district People’s Committee.

The typhoons are likely to increase with climate change. The World Bank found that Vietnam will be among the five most affected countries by rising sea levels. And with good reason: Vietnam has more than 3200 km of coastline and about one fifth of its 84 million people will be affected by a rise of 1 meter of the sea level. According to the Southern Institute For Water Resources Planning, the sea level

in Vietnam rose by 20 centimeters and annual average temperature increased by 0.7 degrees in the past 50 years.



As a response to the destructive typhoon and in the light of coming climate change, Da Loc commune started to replant the mangrove forest with the help of CARE in August 2006. They had learned an important lesson: All the dykes broke in the heavy waves of the typhoon – except for the 500 meters of dyke behind a mangrove forest that had remained untouched.

Mangroves provide important shoreline protection. According to UNEP wave energy may be reduced by 75 per cent during a wave's passage through 200 metres of mangrove forest.

"We understand the benefits of the mangroves to protect the village and the dyke. Because we understand how important it is, we are all very interested in participating in the activities that CARE can help us with," says Mrs. Bui Thi Din from Women's Union.

Apart from protecting the coast, the mangrove is an important nursery for fish and mussels, oysters, shrimps and crabs thrive in the mangrove bio-system. It also acts to filter coastal pollution and is a source of timber and construction materials for the villages.



Mrs. Bui Thi Din from Women's Union is part of the Community Based Mangrove Management Board in Da Loc commune.

Community participation for change

To take care of the mangrove forest, CARE helped to set up a management system. A Community Based Mangrove Management Board was elected by the local people in 2006. In each of the other villages, a board of 20 members was democratically elected. Each household had one vote and the candidates were farmers as well as representatives of different organisations and the village authorities. Democracy is not yet common practise in Vietnam. This has proven to be a chance for the villagers to take their own future by the hand and become responsible for the protection of their land.



Mrs. Tran Thi Hue from Women's Union is a key person in the Mangrove project.

The villagers joined forces to plant and maintain 200 ha of mangrove forest with the support from CARE. Unlike many other mangrove projects in Vietnam this project was successful, because of strong participation of the villagers. They participated with valuable ideas and solutions on how to plant and care for the mangroves. They worked hard to remove by hand barnacles, small shells, which kill the mangrove trees. These barnacles cannot be done away with by chemicals, although a



A new canal built to provide fresh water for saline fields.

of mangrove, the Sonneratia, which the villagers prepared in their own nursery. The Sonneratia needs to have more solid ground when it is young and cannot be planted directly on the sand.

After their success was known, Da Loc village and its mangrove forest was visited by several research and disaster management institutions. The Ministry of Agriculture and Rural Development invited the manager of the Mangroves Project from CARE to share experiences and lessons learnt for 400 staff on how to successfully plant and manage a mangrove forest.

But the project does not stop there. The management board has been on a disaster reduction training course to be ready for another typhoon, including logistics, health care unit, clarification of responsibility and preparation of water tanks and food.

117 households are part of a group for improved livelihoods. Because the fields have become less fertile after the flooding, alternative incomes have been piloted like raising pigs and farming oysters. CARE has also helped to build a fresh water canal that flushes the fields destroyed by salt water with

number of other projects tried this approach.

“The survival rate of the trees is about 80%. This is very encouraging and because we have learned to protect and maintain the forest in the right way, we have been successful this time,” says Mrs. Tran Thi Hue from the Women’s Union.

The villagers also learned more about the different kinds of mangrove trees. They first planted the Kandelia mangrove trees that like to live on wet land and with its roots make the mud firmer. After one year they planted seedlings of another species

of mangrove, the Sonneratia, which the villagers prepared in their own nursery. The Sonneratia needs to have more solid ground when it is young and cannot be planted directly on the sand.

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water from the river based on the community approach.



Mrs. Vu Thi Hanh with a seedling of Kandelia mangrove from the nursery.

“Previously, at the village meeting only the leaders would meet and make the decisions without asking the households. I would keep silent,” Mrs. Vu Thi Hanh from the nursery groups explains. “The community based approach changed the way to make the decisions in our village and the people also changed their way to give more feedback to the leaders. Now we are confident enough to object to decision from leaders if we find them inappropriate and to make sure that the



The young mangrove trees are still fragile and needs to be protected from plastic bags that will make them heavy so they break in the waves. The Green Team is a co-operation between CARE and the Youth Union to take care of the mangrove for the benefit of the commune in the future.

decision makes benefit for the whole community.”

This system has been improved day by day, meeting to meeting. It started with the government’s approval of the grass roots democracy in 2003. Mrs. Vu Thi Hanh knows that there is a slogan for the grass roots democracy: People know, people discuss, people do, people monitor.

However, the implementation of this policy was not easy. When the CARE project came to Da Loc, the manager could guide the authorities on how to democratically set up a management board with the participation of the people in the commune and transparency of decisions and budgets.

The villagers have no official rights to the common land. Now they have gathered to make a contract with the authorities to lease the land for five years. If they do well, the contract will be extended and they can profit from the mangrove forest and make sure it will keep protecting their villages in the future.