

Preparedness for Disasters related to Climate Change

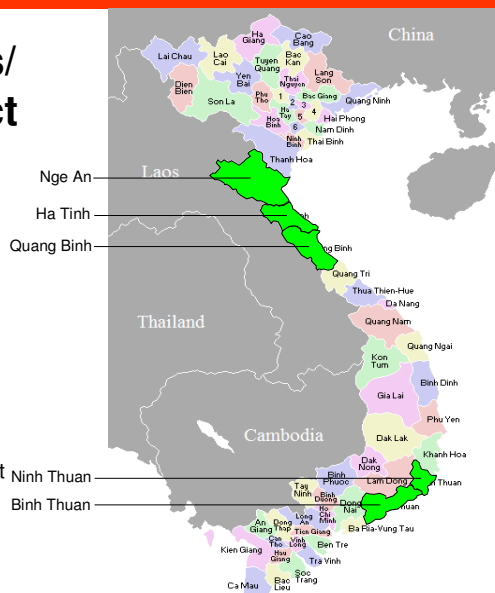
Project:	Preparedness for Disasters related to Climate Change in Vietnam
Implemented by:	Viet Nam Red Cross Society
Supported by:	The Netherlands Red Cross / Red Cross/Red Crescent Climate Centre / Dutch government (2003-2004)
Start project:	May 2003
End project:	December 2005
Total costs:	315,000 euro
Target group:	Viet Nam Red Cross staff and inhabitants of 30 communes (267.605) in 5 provinces
Provinces:	Binh Thuan, Ninh Thuan, Quang Binh, Ha Tinh and Nghe An



Preparedness for disasters related to climate change

Disaster Preparedness/ Climate Change project

- Pilot project
- 2003 - 2005
- 5 provinces, 30 communes
- Implemented by Vietnam Red Cross Society
- Supported by The Netherlands Red Cross
- Total budget: 315,000 euro
- Financial support: the Netherlands Government and The Netherlands Red Cross



Vietnam Red Cross Society (supported by The Netherlands Red Cross)

Background

The devastating impact of the Indian Ocean tsunami reminded us all of our vulnerability to natural disasters. Developing countries are disproportionately struck by disasters in means of lives, damages and development setbacks. In doing so, disasters pose a significant threat towards the achievement of the Millennium Development Goals and the underlying target of poverty reduction. The unprecedented global warming of the planet threatens this burden even more. The course taken by the Red Cross to reduce human suffering and the toll disasters have on development, has further increased the urgency of the efforts taken by the Red Cross to reduce human suffering and the toll disasters have on development.

The number of disasters is rising worldwide and the number of reported disasters that are weather related has doubled over the last two decades. The effect these disasters have on lives and livelihoods are immense. A disaster leaves a trail of damage and devastation leading to diseases and disruption of normal life. The destruction of assets and production capacity, damage of transport, communications and energy infrastructures, limit or set back economic growth and social development. According to the statistics eighty-five percent of the population which is exposed to earthquakes, tropical cyclones, floods and droughts lives in a medium or low developed country.¹

Climate change threatens poor people the most

All over the world people will be affected by climate change. However the impacts will be felt unevenly hard in developing countries and vulnerable societies. People in developing countries have lesser means to mitigate the impacts of a disaster and do not have the capacity to respond to climate change and its implications. To make matters worse; their economies depend on agriculture and fishery which are directly affected by climate change. Developing countries and its poorest inhabitants lack the money and means too prepare for disasters. This results in a low coping capacity and a slow recovery process.

The fact that poor people are the most vulnerable groups does not mean that they are not able to protect themselves from disasters. If these groups are physically able, well aware of risks and well prepared for natural disasters, they have a much better chance of survival and recovery. These groups cope better, compared to people who may be less well informed and prepared. Awareness and preparedness are key words in adapting to climate change and coping with disasters.

'People notice that the weather is changing and that disasters occur more often and are more intense. They affect their livelihoods as many farmers see changes in the seasons and they have to adapt to this by using different crops at different times. By raising awareness and sharing knowledge people can learn from each other which will make them more able to adjust to the changes' said a trainer of the Viet Nam Red Cross chapter in Ha Tinh province.

Viet Nam, a disaster-prone country

When the typhoon "Damrey" hit the coast and the north of Viet Nam last year, thousands of people were deprived of their livelihoods and tens of thousands of people were left homeless. Landslides washed away whole villages and crippled the infrastructure. Viet Nam, which is indicated by UNDP as a medium human development country, is one of the most disaster-prone areas of Asia. In total more than seventy percent of the population lives at risk of being involved in a natural disaster². The reason for the exposure to these natural disasters is the vulnerability caused by the geographical built-up and the countries limited development. The more than 3,500 kilometers coastline and the contrasting landscapes with steep hills and low coastal areas, causes that Vietnam suffers from a large number of typhoons, tropical storms, floods, droughts, seawater

¹ United Nations (2005) 'In Lager Freedom, towards development, security and human rights for all' a UN Secretary-General report. 21 March.

² UNDP (2002) UNDP and Civil Society Organizations: A Policy Note on Engagement

intrusions and landslides. Natural disasters have claimed approximately 7500 lives in Viet Nam in the last ten years³ and destroyed houses, boats and caused economic and developmental setback.

Viet Nam is very sensitive to the impacts of climate change. In particular the expected increase of more extreme weather like heavy rainfall, heat waves, cyclones and droughts, are expected to lead to devastating natural disasters. Furthermore it is expected that the rise of temperatures affect the ecology and cropping patterns. It is expected that wet season will get wetter while dry seasons will get dryer resulting in floods in the wet and droughts in the dry season. Sea level has already risen and is expected to rise further in the coming years. Also the sea surface temperatures have become higher, which is likely to be related to more typhoon activity in upper regions in Vietnam. The period of the occurrence for typhoons has shifted and the intensity of storms will probably be higher. Disasters enhanced by climate change increase human suffering, injuries, loss of properties, environmental degradation and economic stagnation⁴.

This is not only a progress that will happen in the future, the effects of changing weather patterns are already noticeable in Viet Nam. People are seeing a shift of the disaster season, which has become more intense and more irregular. Storms, whirlwinds, floods and droughts have become more serious and more frequent.

'Normally we were affected by drought once in ten years. Now we have a drought every year. Also the number of floods have increased and intensified. Climate change has caused changes in the weather; it has become colder and hotter. And the magnitude of disasters has increase, with the result that our living environment has been changed', an inhabitant of Binh Thuan province said.

Disaster Preparedness and Climate Change project (DPCC)

To reduce losses, damages and the negative impact of disasters amplified by climate changes the project 'Disaster Preparedness and Climate Change in Viet Nam' was launched. This is a joint initiative of Viet Nam Red Cross (VNRC) together with The Netherlands Red Cross and with the support of the Red Cross/Red Crescent Climate Centre and the Dutch Ministry of Foreign Affairs. The project focuses on strengthening the Viet Nameese capacity, in particular of the most vulnerable people, to adapt and respond to disasters related to climate change. The project was placed in the wider context of disaster management which is one of the core areas of the International Federation of Red Cross and Red Crescent Societies.

Disaster preparedness contains the 'activities and measures taken in advance to ensure an effective response to the impact of hazards, including the construction of timely and effective early warning systems and the temporary evacuation of people and property from threatened locations' ⁵ One activity can be the planning of a possible evacuation of people and property from threatened locations.

³ UNISDR (2004) National Report on Disaster Reduction in Vietnam. Hanoi.

⁴ Red Cross, Climate Change and Disaster Preparedness. Vietnam. Learning to live with Climate Change or adapting to a new reality.

⁵ ISDR (2001) website: www.unisdr.org

The project run for a period of three years and raised awareness on climate change issues and its relation to disaster management. It also built local capacity to increase resilience towards disasters. Beneficiaries of the project were inhabitants of thirty selected communes (an administrative unit in Viet Nam that consist of 5-10 villages) in five disaster-prone provinces. Two of the most disaster-prone provinces are in the south: Binh Thuan and Ninh Thuan and three in the north of Viet Nam: Quang Bin, Ha Tin and Nghe An.

The project activities were implemented by Viet Nam Red Cross. Therefore the project also built-up the disaster preparedness capacity of Red Cross staff and their volunteers at various levels; national, provincial, district and commune.

The main activities were: developing study and documentary materials on climate change and disasters, raising awareness amongst decision makers, building capacity of the VNRC, networking, building new partnerships and cooperating with other stakeholders, training for Red Cross workers and volunteers and the assessment of vulnerabilities and capacity of the communes.

All these activities contribute with the 'triple A – principle' of the RC/RC Climate Centre: Awareness, Action and Advocacy.

Advocacy

The DPCC project was one of the first projects to deal specifically with climate change adaptation and was therefore seen as an example project. At the start of the project there was limited attention for climate change in the country. Furthermore a practical problem is that there is a gap between scientific knowledge and practical solutions. To overcome this gap new partnerships should be established between different stakeholders.

To build new partnerships, a workshop was organized for related organizations and national and international experts to share experience on the issue of climate change and disaster preparedness. This resulted in a background document on the relation between climate change and natural disasters in Viet Nam. Also new study materials and background information was developed to provide trainers with new information and to inform local people on disaster preparedness and to raise awareness of the changing climate.

Besides the workshop, the role of the Red Cross in disaster preparedness and climate change was established and reinforced in other activities. One example is the National Seminar that was held in November 2004 on ***Climate Change and Disaster Preparedness*** in an effort to better understand the different faces of climate change and its impacts and possible adaptation measures in Viet Nam. The seminar also contributed to the dialogue between stakeholders in the field of disaster preparedness/risk reduction, sustainable development and environment, in order to share experiences and build partnerships. Another example is that the VNRC took part of the DPCC-working group. This working group organized and attended several meetings. During these meetings national decision makers, national and international stakeholders and the central staff of the VNRC cooperated and shared information. Instead of only discussing climate change or disaster preparedness, the focus was on raising awareness of the relation *between* these issues.

These activities resulted in a broadened and strengthened cooperation and the establishment of the VNRC network, but it also promoted the role of the Red Cross in disaster preparedness and climate change.

Awareness

Increased awareness made many people think about preparing for disasters. Disaster preparedness is indeed the task of the entire society and requires active participation of the local community. Only this will ensure that everybody knows what they need to do in case of a disaster.

'At first people often did not listen to the call of evacuation. They stayed in their houses. We found also out that in the beginning people did not want to use the life vests we distributed, because they believed it could bring bad luck. Now people have different ways to protect themselves. They even learned how to do security checks.' (Trainer Ha Tinh province).

Training

VNRC staff and trainers were trained to increase their understanding of VNRC's community based approach and the link between disasters and climate change and thus why the Red Cross/Red Crescent should have concerns about climate change and extreme weather events. Staff was trained to improve their skills to facilitate the response to natural disasters enhanced by climate change at the commune level.

Another training involved local people and aimed to improve their understanding about the relation between hazards, disasters and climate change. During both trainings, trainees were keen to learn more about the issue of climate change and how to protect themselves and their environment against the impacts of disasters. VNRC trainers increased their training skills and gained additional knowledge about disaster preparedness and climate change. The training contained practical disaster preparedness tools and involved local communities using their own coping strategies.

'We thought that we had more knowledge than the local community and we kind of imposed our ideas to them. When we first worked with the bottom-up approach we thought it would be a waste of our time and that the time was too short to talk to people. But we see that it is much better now. We have learned that village leaders and local people have a lot of useful knowledge' said Mister Dinh, head of the Red Cross chapter in the Ninh Thuan province.

The training was useful because the VNRC staff noticed that many local people did see changes in the daily weather and in disaster patterns but could not explain why these changes were happening. In all of the five provinces, local people have clear examples of noticeable weather changes: the rise of temperatures, the raining season coming earlier or sometimes later, the drought season coming in another period and continued longer, and storms are becoming more and more intense. These changes caused hazards to happen more frequently and more unpredictable.

'People can not rely upon their traditional knowledge and experiences anymore' said vice-president Binh of the VNRC Ninh Thuan chapter. *These changes directly affect the livelihood of people. One fisherman in Quang Binh province noticed the faster erosion of*

the coastline near his commune. Not only does this threaten the living environment of the people who live close to the coastline, it also narrows the passage from the sea to the village. This causes damages to the boats and makes fast refuge from heavy weather on the sea more difficult.

During a hazards, vulnerability and capacity assessment (HVCA: a risk analysis tool used within the Red Cross/Red Crescent Movement) the community identified the strengths and weaknesses of households, communities and institutions regarding disasters. The results from the assessments were used to develop the commune's disaster preparedness plans⁶.

The HVCA consisted of a three day community based training course. The training addressed disaster preparedness, the role of vulnerability and techniques to involve the community into the disaster preparedness planning process, to ensure that people know what they need to do when a disaster strikes and to increase their understanding of the importance to prepare for a potential natural disaster and with this addressing the possible contribution of the people to limit the impacts of a disaster. Following the training, a two day assessment is conducted by the trainees to find out local vulnerabilities, needs, coping strategies and resources. A group of approximately 25 people representing all social groups in the commune work together in making a clear overview on the current situation of hazards, vulnerabilities and capacities of the commune. One of the activities of the HVCA is drawing a map of the commune which includes the dangerous and safe areas. People share information on how to cope with disasters, on how to prepare, what resources they have and what they are lacking. Drawing the most vulnerable spots of the commune on a map and a safe place or evacuation direction, will help people to understand the risks and possibilities of the commune.

'When a flood happens we know better what to do, because of the preparedness plan we made. We identify weak places in the village and mobilize everybody to prepare. The loudspeaker system informs people about a disaster and what people should do' said Mister Phanh Phong from Thai An village in Ninh Thuan province.

Some communes were happy with the maps because they never had a map of the commune before and having the map made it easier to explain to people what they should do in case of a flood. One map showed clearly the evacuation routes from all the villages.

'The difference after the training and assessment is that we now have a more detailed disaster preparedness plan and local people were involved in the planning, people of household level work on the planning as well', the head of the Lien Huong village said.

In these vulnerability and capacity assessments local VNRC workers, commune leaders and local villagers worked together in defining the vulnerabilities, risks and capacities of the specific commune. Working together with local people and local authorities provided more detailed and reliable information, because 'local people have knowledge about the commune' as a spokesperson of the local authority in the An Hai commune in Ninh Thuan province put it. Conducting a HVCA helped local authorities, aid organizations and local people in better understanding the risks and resources that are related to disasters.

⁶ A disaster preparedness plan contains the responsibilities people and organizations have before, during and after a disaster.

Action

Disaster preparedness plan

The skills learned at the trainings and the newly gained knowledge should be transferred into action. The information gathered during the assessment on the vulnerabilities, risks and capacities of the specific commune are useful for the disaster preparedness (DP) plan every commune has to develop. This plan describes all kind of disasters threatening the commune and lists out the responsibilities of groups and persons during a disaster. Often these plans are made by local authorities without the input of local people. The goal of the DP plan is to strengthen the capacities by being actively ready to adapt to climate changes and respond to disaster. This can only be done by involving the entire community, because the people need to know what to do when a disaster strikes. Furthermore, including local people in the mapping of hazards, vulnerabilities and capacities provides up-to-date detailed information for disaster preparedness plans. Therefore the results of the HVCA were consolidated in a community DP plan, focusing on smaller-scale activities, more within reach of the community and based on the needs and ideas identified by the community itself.

Risk reduction measures

The HVCA did not only list out vulnerabilities and capacities of the communes, but also indicated needs to increase the communes' capacity. The communes developed work plans for "small-scale-projects". VNRC would support the implementation of one of these projects per commune. The small scale projects consisted of, for example, rescue equipment (like life buoys or boats), early warning systems, loudspeakers, small dams, tree planting to reduce sand drift and erosion, dykes, drainage systems or emergency shelters.

Risk Reduction Measure in the Ha Tinh province

In the Ha Tinh province people and especially farmers of the Quang Phu commune suffered a lot from heavy rains and extreme droughts. A small dam was built to protect the fields from become flooded or dried out. However the unstable dam was quickly destroyed after extreme rainfall and the field would be flooded, and because of the bad construction the water was not kept effectively and during dry season there was a lack of water. Every year the dam needed to be rebuilt once or twice by local farmers, who tried to save their harvest.

Pham The Phu is a farmer and she was involved in the HVCA conducted in her commune: 'Together with other villagers we prioritized that a dam was what everybody needed in this commune. Most people in this village work as farmers so they really depend on water.' The money provided by the Red Cross was used to construct a new dam which was finalized last year. The advantages are already noticeable: 'The dam has not collapsed so the fields have not flooded. That means that we can have two stable crops a year instead of one. Also the amount we harvested last time was 30 % higher than normal.'

Ti Lam is another a farmer and she is also very happy with the dam: 'The harvest is better and when there is no rain they don't have to go very far to get water. Although the dam was constructed just a few months ago it has been very effective because the last year there was no rainfall, but the dam provided enough water for everybody.'

The farmers contributed to the construction of the dam by providing local materials and offering their labor.

Besides the dam, the two farmers also learned through the project on how to prepare for a disaster. Lam: 'We have clear guidelines on how to prepare for a storm and on how to respond afterwards.' Phu: 'When the loudspeaker announces the weather forecast and warns for a disaster we start preparing. We help each other to harvest the rice which otherwise will be destroyed. We preserve seeds, prepare food and water and wait inside our houses till the storm passes on.'

In the Quanh Binh province trainees collected ideas for risk reduction measures among the inhabitants of the Nhan Trach commune. In a meeting with seventy to eighty people, the most urgent needs of the commune were prioritized. This was done by writing all ideas of the people on a board and by discussing the possibilities for all the ideas. When a few ideas remained, the participants voted for one of the ideas. In case of the Nhan Trach this was a rescue centre. This centre will be used to house the rescue teams. The teams are needed because the commune borders with the ocean and suffers from heavy storms that threaten many families who live from the sea.

The risk reduction measures contributed to a better disaster reduction at commune level. Because the local communes were closely involved with the progress of developing these measures, they were appropriate to their needs. There was more commitment to the project and responsibility for the maintenance of the outcomes, because of their own involvement. The rescue equipment, which was provided during the project as part of the small scale projects, proved to be necessary and useful in the areas affected by weather related disasters.

'Thanks to training in disaster preparedness and first aid, local staff and volunteers of the VNRC in the An Hai commune in Ninh Thuan province, responded well to the flood in late 2005', said Mister Dat, head of VNRC chapter in An Hai commune in Ninh Thuan province.

The project contained a participatory approach which taught VNRC workers and local authorities on how to mobilize local people. The approach benefited local people because it increased the feeling of ownership and improved their own development. The hazard, vulnerability and capacity assessments required active participation of all involved parties. This resulted in a better understanding and therefore more active attitude from the local people towards disaster preparedness. The people understood their own responsibilities and capacities. By supporting the small-scale projects that they came up with themselves, they were also given the means to follow-up on their ideas how to strengthen their DP capacity. The VNRC gained knowledge on how to mobilize and involve local people in disaster preparedness activities. Both the local people and the VNRC workers are more aware about their influence regarding the reduction of vulnerabilities to a disaster.

In the Ha Tinh province many changes has happened because of the project. Some of the mentioned changes by the local people: the attitude of people has changed, there is better cooperation, a better use of media and the number of shock brigades has doubled after 2002.

'Before people didn't know what the role of the government or their own role was. But now they know that they can do something themselves too', a trainer of the Ninh Thuan province explained.

Involving local people in the project implementation was regarded very positive both by the VNRC staff as well as by the participants.

'This project has led to more focus on the society. The activities are focused on the local commune and the local authorities. The approach was community based because of the small scale projects. The VNRC started with this approach already in 2000 but because of this project there is more attention to this now', said Miss Linh, program officer of the Spanish Red Cross in Viet Nam.

In short, the project contributed in different ways to better disaster preparedness of local communes in Viet Nam. The figure below shows the impact of the project as it was mentioned by the local people of some of the visited communes.

Before disaster	During disaster	After disaster
☞ Better information dissemination and awareness raising ☞ More accurate weather forecast ☞ More adequate disaster management materials and facilities ☞ Disaster preparedness plans are developed with more participation of local people ☞ More specific disaster preparedness plan, with better evacuation options ☞ Better knowledge and skills in disaster management ☞ More training opportunities with better results ☞ More rehearsal events at provincial and district levels	☞ Better and more timely disaster response ☞ Guidance and instructions from higher levels are closer to reality ☞ Better relief assistance ☞ Local people have better attitude to and more cooperative in disaster preparedness ☞ Better mutual support spirit	☞ Quicker restoration of agricultural production ☞ More timely provision of supports ☞ Quicker environmental cleaning ☞ Better participation of local people ☞ Better mobilization of contribution for disaster relief ☞ More timely reviewing and lesson learning from disaster preparedness activities

Source: Final evaluation DPCC project 2006.

Lessons learned

Climate Change is a global problem drawing worldwide attention. Every country, government and society should be aware of the changes and its implications. Climate change should be part of all disaster management activities and should try to discover changes and trends and take the appropriate action to be prepared and able to respond to it.

The DPCC project has made an important step towards linking the disaster management to the climate change community. It put climate change adaptation into practice at the local level. At the end of the project an evaluation was done to find out the strengths and weaknesses of the project and draw lessons from it in order to improve future and other ongoing projects.

One of the difficulties of being the first to incorporate a climate change component was that it did not gain much recognition when the project started. To address a new topic where the indicators and effects are not directly visible was a difficult task, moreover in a developing country such as Viet Nam that has more pressing problems to solve. It takes time and efforts to make decision-makers and the general public aware of the threatening consequences of climate change and extreme weather events. The current ongoing scientific debate on climate change is receiving a lot more recognition and attention. The setting has improved significantly since the start of the DPCC project and a follow-up of the project will definitely get more attention.

Another difficulty was that most information on climate change is very scientific. To increase dissemination and awareness within Viet Nam, more study material and documentation should be developed. More attention should be paid to translate scientific knowledge into practical solutions and understandable language. The newly developed materials were a welcome addition to the existing materials, but more up-to-date information is required. Priority should be given to the dissemination of education materials that are appropriate to their daily-life, among stakeholders and inhabitants of disaster-prone communes.

Trainers and trainees received the climate change topic with enthusiasm. However the training course was considered too short and because the training was given just once, much knowledge did not convey. In some communes this resulted in a weak implementation of the HVCA or other tools. In other cases the communes focused more on the actual risk reduction measures, instead of the disaster preparedness plan. Or the official disaster preparedness plan did not match with the outcomes of the HVCA and therefore lacked the most accurate information contributed by the local people. To improve the understanding of trainers and participants, more (refreshment) trainings should be given.

The climate change and disaster preparedness project contributed to the wider Disaster Preparedness strategy of the VNRC in different ways. It has improved the role of the VNRC in disaster management and made clear that the VNRC is an organization that doesn't close its eyes for new risks. Not only did the project start the discussion on climate change within disaster management in Viet Nam, it also provided useful answers to local communes, helping them to adapt to the changes of climate and responding to extreme weather events. More specifically: during the project thirty coastal communes were able to increase their resilience for storms, floods and droughts by implementing risk reduction measures. They contributed to a better disaster reduction at the commune level.

It is recommended that the project should be continued, aiming to build upon the project achievements to date.

Adapting to new realities

The need for disaster preparedness was demonstrated during the Damrey typhoon in 2005, which was one of the most threatening hazards of the last ten years. The Viet Nameese government, working together with other aid organizations, effectively evaluated around 600.000 people in the threatened areas. Several thousands of others were mobilized to consolidate dyke segments along the coast and rivers. Although Damrey caused casualties and much suffering, it was not as destructive as it could have been if no preparations would have been made. Most people had found a save haven or shelter in time. VNRC staff and volunteers were actively involved in the evacuations, search and rescue teams and provision of immediate relief in all the affected areas.

Disaster preparedness has proven to save lives and to reduce damage done to properties and infrastructure. With the projected impact of climate change on the occurrence of weather-related disasters, this is a very important lesson. To be conscious of climate changes and its impact is an important incentive to better preparedness. Not only in Viet Nam but all over the world.

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