

# The ADAPTS programme in Vietnam

## Synthesis report

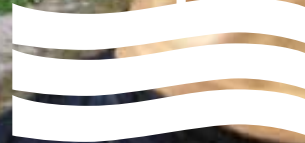


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Adaptation Strategies  
for River Basins

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## Colophon

Published by ADAPTS, 2012. Funded by Ministry of Foreign Affairs of the Netherlands

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## Project partners

IVM - Institute for Environmental Studies, The Netherlands | Both ENDS, The Netherlands | ACACIA Water, The Netherlands

AEDES - Asociación Especializada para el Desarrollo Sostenible, Peru | Ministry of Environment, Peru | Development Institute, Ghana

Water Resources Commission, Ghana | Action for Development, Ethiopia | Borana Zone Water Office, Ethiopia | CSRD - Centre for Social

Research and Development, Vietnam | Southern African Development Community, Botswana | Vitae Civilis, Brazil

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# 1. INTRODUCTION

## 1.1 The background to ADAPTS

Climate change is not only expected to result in gradual changes in temperature, rainfall patterns and sea level rise, but also to increased climate variability and extreme events which will threaten water availability and food security for millions of poor people. Local communities and national governments both urgently need adaptation strategies to deal with these impacts.

In 2008, the Institute for Environmental Studies, ACACIA Water, and Both ENDS started the ADAPTS project, funded by the Dutch Ministry of Foreign Affairs. The overall aim of ADAPTS was to increase developing countries' adaptive capacities by including considerations about climate change and options for adaptation within water policies, local planning and investment decisions.

ADAPTS has worked with local communities, civil society organisations, local and national governments, scientific institutes and the private sector. It has shown that adaption is already taking place at the local level. ADAPTS sought to combine local and global knowledge in water management and to empower vulnerable communities to design and implement cost-effective and sustainable adaptation measures. Through dialogues with local and national governments it sought to ensure the inclusion of the knowledge and visions of local people in the development of climate-proof water policies and investments.

To increase adaptive capacities in developing countries, ADAPTS focused on:

1. **Knowledge development:** developing information about climate change and studying how local water management can be made climate proof.
2. **Local action:** the identification, support, documentation, analysis and dissemination of innovative, locally-based interventions to ensure that local knowledge and visions are included within dialogues about basin-level and national policy.
3. **Dialogue:** establishing policy dialogues between local and national stakeholders on the issues of sustainable water management and adaptation to climate change to ensure up-scaling and outreach.

The project took place in six countries between November 2007 and December 2011. This report summarises the main activities, results and insights of the Vietnam case. Similar reports for Ethiopia, Ghana and Peru can be found at [www.adapts.nl](http://www.adapts.nl).

## 1.2 ADAPTS in Vietnam

The impact of climate change is an important issue for the Huong River basin area in central Vietnam. The region already suffers from natural disasters, which are projected to increase in frequency and intensity due to climate change. Climate change is currently high on the political agenda in Vietnam and there is awareness of climate-related issues and the need for adaptation at the community level. However, there is little knowledge about the order of magnitude of future impacts or the time frame in which they are likely to occur. Lack of capacity at, and coordination between, civil society organisations, authorities and research institutes has hampered the development of effective adaptation strategies.

The ADAPTS project in Vietnam was developed by the Centre for Social Research and Development (CSR/D) in cooperation with the Dutch project partners. The main objectives were:

- to enhance the resilience of communities in the Huong River Basin;
- to establish a dialogue between communities, government authorities and researchers on climate-proof water management;

- to empower local communities and the CSR/D on the topic of climate change adaptation;
- to support concrete adaptation measures that will become examples of the sorts of actions that can be taken.

The project focused on three communes in three different districts in the Huong River Basin. Trainings and workshops with experts and local communities were used to identify the most pressing issues, along with possible adaptive responses. A set of selected practical measures were then implemented, with the results being disseminated to policy makers and fed into the Action Plan on Climate Change Adaptation that has now been officially adopted by Thua Thien Hue Province.

The project was set-up as a one year pilot for the period 2009-2010. However, due to its success in the first year, the project was extended into 2011 to enable further promotion of the results. During the extension phase there was a focus on developing the Provincial Action Plan on Climate Change Adaptation as well as on up-scaling the ADAPTS approach to other regions in Vietnam through working with Vietnam River Networks (Adapts, 2011).

## 2. THE HUONG RIVER BASIN: AREA DESCRIPTION

### 2.1 Physical environment, socio-economic situation, climate and climate change

Thua Thien Hue Province, contains the Huong River Basin and important north-south, and east-west traffic corridors, with Highway No.9 connecting Vietnam with Thailand and Laos. Thua Thien Hue is known throughout the country as a centre of culture and tourism. In 2010 it had a total population of about 1.09 million and an average population density of 225 people/ km<sup>2</sup>. Thua Thien Hue Province covers 5,062 km<sup>2</sup> and contains a diverse topography which includes mountains, hills, plains, lagoons, and coastal areas. Seventy five of the territory is covered by mountains and hills. The coastal plain is flat with an average absolute height of 10-15m, and covers about 16% of the land surface. The remaining area is covered by lagoons, sand dunes and coast. The province has about 120km of coastline. The climate differs across the region, with temperatures decreasing gradually from the east to the west; and rainfall increasing from the east to the west and from the north to the south [Suu et al., 2010].

The Huong River Basin is the most important basin in the province. The system consists of three branches, the Ta Trach, the Huu Trach and the Bo. These three branches converge at the Sinh confluence and then flow into the Tam Giang - Cau Hai Lagoon before entering the East Sea. The Huong River and the Tam Giang - Cau Hai lagoon provide water for the provincial capital of Hue and is the lifeline for the people living along the river. Storms and floods are common occurrences. Between 1975 and 2005, the province was affected by 40

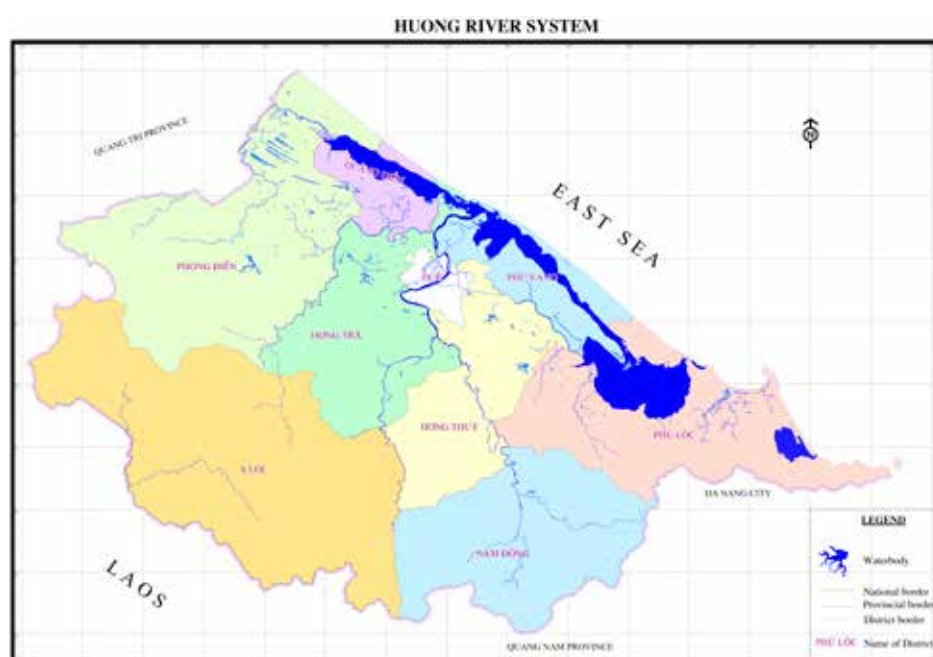
flood events. The most severe flood occurred in November 1999, and inundated 90 per cent of the lowland areas. Overall, 352 people died, 25,000 houses were washed away, and about 160,000 cattle died. In total, the direct flood damage was estimated at 120 million USD.

### 2.2 Changes in climate and hydrology

Thua Thien Hue (TT Hue ) is one of the provinces most affected by climate change in Vietnam. According to a report of the province's Hydro-Meteorology Forecast Centre, clear changes in temperature, as well as changes in the frequency and intensity of floods, rainfall, droughts and storms have been observed in recent years. For example, current average temperatures increased by 0.6°C in Nam Dong district and by 0.5°C in A Luoi district since 1982. The number of hot days also increased from 45-55 during the period 1976-1996 to 55-65 in the period 1997-2007. The number of cold days has also increased. A special case of extreme cold weather occurred at the end of 2007, lasting for 28 days, the longest period ever recorded.

Current flood peaks are higher now than they were in 1977-1986, and have increased by 50 cm in Kim Long and 60 cm in Phu Oc. Similarly, flooding frequency has increased by 60% compared to the 1977 – 1986 period, with the overall volume of water also on the rise. Between 1- 6 November 1999, the volume of flood water was about 300 billion m<sup>3</sup>, and covered 90% of the plain area with 1-4 metres of water.

Changes have also been recorded in rainfall. The average annual rainfall in the area has increased by 660mm with daily peaks averaging an increase of 200-300mm more than in the previous decade. The annual rainfall patterns are also becoming more unevenly distributed, with more rains in the wet season (from September to November) and less in the dry season (June and July). The same report also shows that strong and extreme storms have become more frequent.



2-1 Map of the Huong River Basin

A 2007 report from the Department of Natural Resources and Environment (DONRE) projects that, over the coming decades, sea levels will rise by 2.5 - 3.0 cm per decade, and average temperatures will increase by about 0.1°C per decade (possibly by 0.1-0.3°C per decade during the summer). Rainfall is projected to further increase in the rainy season and to decrease in the dry season, resulting in a higher risk of both floods and droughts. The intensity of the rainfall is also projected to increase.

### 2.3 Water resource management and response to natural disasters

When the project starts in 2009, there is no provincial authority responsible for water resource management and natural disaster control in the Huong River Basin. These duties were previously carried out by the The Huong River Management Agency which was split up in 2008 and merged with other provincial departments. Many departments are involved in managing different activities along different parts of the river. The Department of Agriculture and Rural Development (DARD) is the main agency responsible for managing activities along the river. Its hydraulic branch is responsible for managing the reservoirs and the hydropower plant in the upper part of the river. Its fisheries resources branch manages fishing activities along the river. It also runs

the Centre for Weather Forecasts and Hydrometeorology, which covers the whole area and the storm, flood control and dyke management branch plays a leading role in disaster prevention and management. A state owned water supply and sewerage company abstracts water from the Huong River to provide water for regional communities, although this company is managed directly by the heads of Provincial People's Committee (PPC). As a result the management of the basin is fragmented, lacks coordination and is less effective than it could be.

Until recently, the only multi-stakeholder institution concerned with water was the Provincial Committee for Flood Storm Control, Research and Rescue (CFSCRR), which directly coordinates the prevention of, and responses to water related disasters. In 2011, the Steering Committee on Climate Change, was established, This involves the heads of most relevant departments (DONRE, DARD, the Department of Foreign Affairs, the Department of Science and Technology and the Department of Police). However, the members of this steering committee are too busy to give sufficient priority to this task and the secretariat has insufficient knowledge and experience about climate change to be able to perform their tasks effectively.

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## 3. AWARENESS RAISING, VULNERABILITY, ADAPTIVE MEASURES AND CAPACITY BUILDING

The initial aims of the programme were threefold. First, to investigate the adaptation measures already implemented by local communities, the government and international organisations in the region. Second, to identify potentially effective adaptation measures in water management. And, finally to select and implement a specific adaptation measure based upon on the findings of the first two stages.

### 3.1 Activities on awareness raising

The first step was to arrange a training course to raise awareness among the staff of CSRD and potential project partners, (such as the Vietnam River Network and the Department of Environmental Protection). The objectives of this training course were:

- To improve understanding of how the climate is changing

and the effects that climate change has on human beings and natural resources at the global, regional and local level.

- To increase knowledge about the implications of climate change from a scientific, political, and development point of view
- To find out about the climate change adaptation measures that have already been put in place and to explore ways of enhancing their implementation in the Huong River Basin

This training session was supported by the IVM and the Philippines University on the causes of climate change, its projected impacts, the concept of climate change adaptation and methods for undertaking research on climate change and adaptation. During the training course, the participants

also discussed the likely impacts of climate change on Thua Thien Hue on the basis of the results of the Netherlands Climate Change Assistance Programme Project (NCAP). They also identified areas and groups of people that are especially vulnerable to climate change. This led the participants to propose possible adaptation strategies for the Huong River Basin.

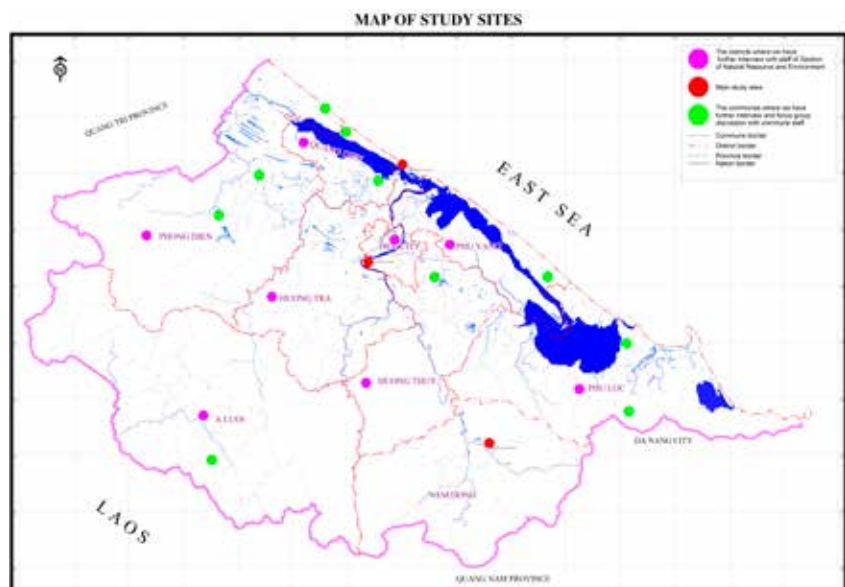
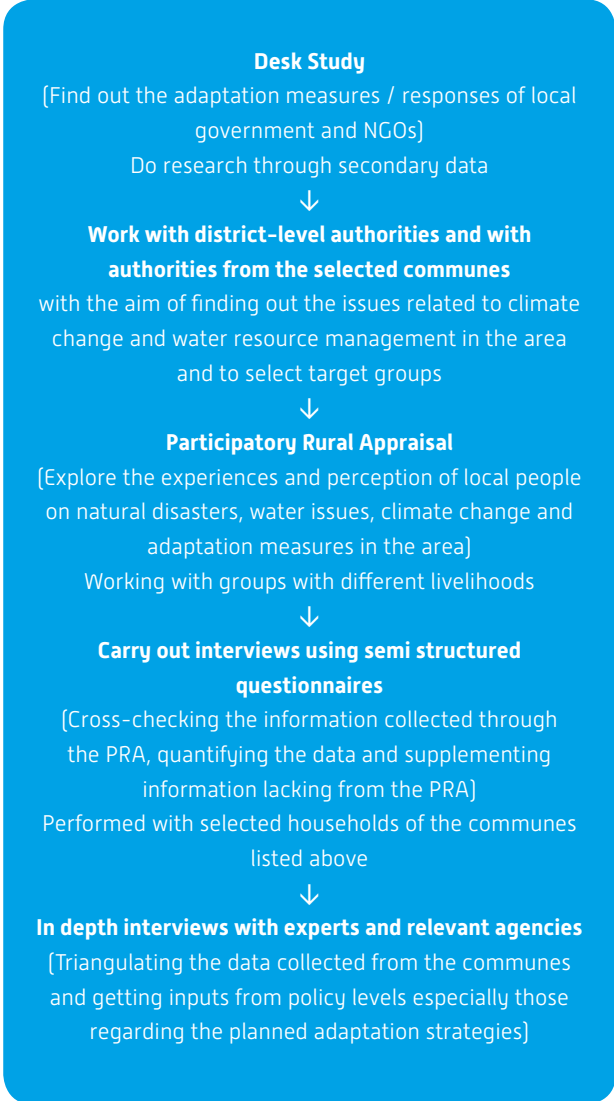
This was then followed by a second workshop, which had two objectives. First, it aimed to provide an opportunity for interested stakeholders in the Huong River Basin to gain a better understanding about climate change and adaptation. Participants in the workshop included policy makers, scientists and civil society organisations, who shared their research findings, experiences and discussed their approaches to climate change adaptation. The second aim of the workshop was to establish a dialogue among stakeholders involved with climate change issues and/or responsible for addressing adaptation in the region. The participants were actively involved in looking at the projected changes in climate in the Huong River Basin, and conduct (group) exercises to identify possible impacts, groups of vulnerable people and locations and possible adaptation strategies.

These two workshops were then followed up by a desk study and interviews with staff of relevant agencies which led to the creation of an inventory of the various adaptation measures that have been implemented in the region by governmental departments and other (international) organisations.

Finally, the CSRD conducted an extensive study of the main options and priorities for adaptation among local communities living along the Huong River Basin. The aim of this assessment was threefold:

- To investigate the adaptation measures that have been already implemented by local communities, government and international organisations in the region
- To identify effective future adaptation measures related to water management
- Based on these findings, to select a specific adaptation measure in each area for direct support.

The main elements of the work package are summarised in the text box below.



3-1 Map of study sites



This led to three communes within in the Huong River Basin being selected for the main study (see below) where extensive interviews and group discussions were conducted with representatives of all the districts. This study led to the publication of a manual about the adaptation measures that local people have been using to cope with extreme events.

Three communities, in three different districts, were selected to be the focus for the study.

#### **Huong Loc Commune**

Huong Loc commune is located in a mountainous area in Nam Dong District. The total population of this commune is 1,959 people (2009), and it covers 6,620 ha. Many local residents came from lowland areas, such as Phu Loc District, during the government resettlement campaign to create a New Economic Zone in the 1980s. This commune forms part of a buffer zone of a National Park, which is surrounded with forest. About 80% of the local people are dependent on forest-related activities. In addition, people also earn their livings through gardening, animal husbandry and daily wage-work.

#### **Thuy Bieu Commune**

Thuy Bieu, is located 7km to the west of Hue, the provincial capital. To the north it is bordered by the Huong River. The main sources of livelihood are cultivating fruit trees (a specialty is Thanh Tra - Pomelo - a traditional sweet citrus fruit) and rice and animal husbandry. The commune has 2031 households with 10,216 people and covers a mere 657 ha.

#### **Hai Duong Commune**

Hai Duong, a coastal commune bordered by the lagoon, is located on the lower section of the Huong River. The commune covers 1,027 ha and in 2009 the population was 6,778 people. Transport links between this commune and Hue City are difficult due to the separation by the lagoon. The land here is vulnerable to erosion and the Ministry of Natural Resources and Environment has invested in constructing sea dykes in this locality.

### **3.2 Vulnerability**

The study showed a rather limited level of awareness about climate change among communities and authorities, with a number of governmental workers admitting that they lacked information and understanding about the issue. In the three communes, only a few people had ever heard about climate change. Although the term was new to them, many people quickly grasped the concept as they had experienced an increased frequency and intensity of extreme weather events (the two most frequent being storms and floods). These events often have the greatest impacts on people living alongside the river. Most people stated that while they are able to protect themselves from floods, storms are more damaging and they have limited capacities or resources for recovery. The coping strategies that people use include

keeping in contact with their neighbours, moving things to higher ground, and evacuation.

This study found that women play a major and important role in coping with disasters, even though this role is often overlooked. A lot of women participated in protecting their families and communities from disasters. Before a disaster, they prepare food, blankets and warm clothing, move their mobile property to safe places, take care of the elderly and children and safeguard cattle and poultry. During the disaster itself, they must care for the elderly and children, cook for their family and other members of the community. Women are also involved in repairing the damage caused by extreme climatic events: cleaning the house; repairing furniture and tools, planting new trees and restoring damaged ones; sweeping rural roads and taking care of everything at home. However, they have not had much chance to participate in and influence risk mitigation planning or relevant policy making.

In upstream areas, such as Nam Dong, people's livelihoods are primarily dependent on forestry, farming, animal husbandry and as day-labourers. They expected that an increase in temperatures or of the incidence of droughts would increase the number of pests in the rice fields and inhibit animal growth. Additionally, forests would become more vulnerable to forest fires. People's health would also be affected by heat waves and changes in rainfall patterns: which would allow diseases to spread more easily through crops, animals and people, the latter reducing labour productivity and incomes. During heavy rains, people find it more difficult to travel from their homes to the forests and fields where they work. Also there is the threat of riverbank erosion.

Thuy Bieu is threatened by sea level rise and salt water intrusion into the lower parts of the Huong River. An increase in salinity in the river would have a negative impact on water quality. Excessive rainfall in the rainy season can cause flash floods, leading to riverbank erosion that leaves tree roots exposed and more susceptible to rot or damage. In addition floods cause a serious threat to human lives and health and properties.

In Hai Duong, the responses of local people clearly reflected the opinions of a coastal, lagoon-dwelling community. On one hand they would welcome a sea level rise because a larger water area would allow for higher fish and shrimp catches and cooler water would improve the quality of shrimp. On the other hand they recognise that a sea level rise will force some people to abandon their homes and relocate to higher ground. Equally an increase in rainfall would cause fresh-water intrusion into the lagoons which would make it more difficult to breed and maintain aquatic species that require salt or brackish water. Households who run small services and trading activities worried that their goods would be perish more readily if there were an increase in temperatures.

The buying and selling of goods will become more difficult in the rainy season due to limited mobility. And workers may feel less healthy and be less productive under higher temperatures.

### 3.3 Potential adaption measures

The project found many ideas and initiatives for adaptation in the area. Based on the findings from the extensive field study, the following measures were proposed for each of the three parts of the Huong River Basin.

#### Huong Loc Commune, Nam Dong District:

- The restoration of primeval forests in the watershed; planting more trees in residential areas to provide shade during hot weather; planting more trees along the riverbank to prevent erosion (ensuring these are appropriate trees, with firm-sticking roots and fast growing varieties).
- Covering the base of vegetables with compost to keep them warm in cold weather and cool in hot weather.
- Using airy cages for the livestock and studying means of breeding during severe weather conditions.
- Building shelters for households living in dangerous areas and along the riverside to evacuate them to in urgent cases.
- Raising awareness of the need to protect natural resources, and effectively managing and conserving water resources.
- Establishing crop insurance mechanisms (a model that has been used for reforestation in Nam Dong) through a disaster insurance scheme which could be managed by the Vietnam Insurance Company.

#### Thuy Bieu Commune, Hue City:

- Consider changing crop patterns and sowing times.
- Construct safer houses (the design to draw on local people's preferences as well as technical construction standards);
- Teaching children how to swim (integrated into the elementary educational programme);
- Improve or construct drainage systems.

#### Hai Duong Commune, Huong Tra District:

- Planting mangroves to protect homes and fishing areas (particularly *Thespesia Populnea* "Tra" tree, an indigenous tree) in coastal areas.
- Planting pine trees along the coast to block waves and protect the seashore.
- Promoting access to clean water for consumption and livelihoods (by upgrading the system of rainwater harvesting);
- Raising awareness of the need for a green, clean and beautiful environment, ensuring the quality of underground water and avoiding any blockages of flows in the lower sections of the river.
- Establishing an early warning system and providing boats

so that individuals and households can leave dangerous areas before storms.

- Raising awareness and enhancing understanding about climate change among civilians and local authorities.
- Raising awareness and promoting the role of women in disaster management and climate change adaptation.

These community measures require an enabling environment if they are to be put into practice. Based on the study's findings, the research group made the following recommendations to policy makers:

- Facilitate the formulation of a focal group on climate-proof water management in the Huong River Basin to supervise the various activities in the basin and come up with an integrated, climate-proof strategy for the basin as a whole. Communities should be represented in this focal group.
- Support further research on the impact of dams and reservoirs along the river basin and the way they affect water resources, and further investigate the resilience of those living alongside the river.
- Strengthen supporting mechanisms and organisations (such as the Storm and Flood Prevention Committees) from the central to local level, as well as the Provincial Hydrometeorology Forecast Centre, which does not have the (human resources and facilities it requires to meet the tasks it has been assigned.

### 3.4 Capacity building

During the project, the staff at the Centre for Social Research and Development (CSR/D) improved their capacity to address issues of climate change adaptation, through their work with local communities as well as with provincial and local authorities. Following a training course in May 2009 (which also involved partner organisations and local authorities), CSR/D conducted an extensive survey on the adaptation priorities of local communities and the existing initiatives of the local government and (inter)national NGOs. This involved CSR/D in continuous cooperation with the provincial authorities. This study and the workshops have raised awareness among communities, NGOs and authorities on climate change and the need for further adaptation.

The ADAPTS workshops and conferences, gave the director and staff of CSR/D the opportunity to improve their knowledge about climate change, their skills in dealing with it and to learn about experiences in other countries. The workshops also allowed partners to discuss and share their work and the lessons they have learned, thus promoting a cross-fertilisation of knowledge and ideas.

## 4. INTERVENTIONS

The extensive study conducted by CSRD examined the adaptation priorities of local communities with the aim of identifying and developing promising local adaptation strategies. As part of this study, CSRD documented a large number of adaptation measures that were already in existence in the three regions. It was clear that in all three of the three selected areas people had already taken measures to protect their most important ecological and livelihood resources.

### 4.1 Local community meeting

Village 16 is vulnerable to natural disasters due to its location and the poor living conditions of the community. Adjacent to the community there is an area of shallow water, (visible as land at low tides) which was identified as a potential area for breeding and providing protection for fish. Such an investment has the potential to bring environmental benefits as well as improve the welfare of the community. In Thai Duong Ha Nam Village, the work with local authorities and field trips, led the project to focus on a sampan community residing on an exposed plot of land. The community is often affected by flooding, storm winds and heat. Here the most suitable intervention identified was to plant trees around the residential areas in order to protect against high water flows and provide wind breaks and shade. Actions were proposed

for two villages in Huong Phong, Thuan Hoa and Con Te. Both suffer from damaging floods and erosion which have adverse impacts on livelihoods and human health. A small mangrove forest grows in the vicinity of the villages, which if expanded closer to the communities, could provide protection against flooding and erosion, while improving environmental quality.

Based upon these findings, a programme of afforestation and reforestation was undertaken in January 2010 in the three communities. Nearly 27,000 trees of various varieties were planted, with mangroves being the most prominent. These trees can serve as a buffer against floods and erosion and provide other benefits such as shade and habitat for species. Given the projected increase in the frequency and intensity of climate related disasters and especially floods, this was seen as a promising adaptation measure. In Thuan Hoa Village, CSRD cooperated with the Environmental Protection Branch (EPB) the Communal People's Committee (CPC) and the Veteran's Association to conduct the mangrove planting. The EPB was responsible for technical activities, such as assessing the habitat, tree selection and maintenance. The CPC worked with village leaders and the chairman of the Veteran's Association to establish rules to protect the new mangrove forest.

4-1 Local community meeting



## 4.2 Mangrove planting

This pilot activity has been visited by various organisations including IMOLA (Integrated Management Of Lagoon Activities, a project funded by the FAO), GEF (the Global Environment Fund –part of the UNDP), the Royal Melbourne Institute of Technology, provincial authorities and university students. Many news items and articles on the pilot activities have been posted and broadcast on provincial television and newspapers.

In October 2011, CSRD invited an independent consultant to evaluate the mangrove planting activity. The evaluation report states that mangrove adapted and developed very well at all three sites. *Sonneratia* trees had grown from about 0.3 m in January 2010, to 1.5m in 2011, with some reaching 1.8m and already flowering. The roots of these trees have expanded from circa 5cm to circa 15cm after just 2 years. In general, over 70% of the local people were positive about the potential of the mangrove for protecting dams, reducing the impact of waves, preventing landslides and creating habitats for aquatic species (Hanh, 2011).

The evaluation report also noted an improvement in awareness among local authorities and people about the role of mangroves in adapting to climate change, especially in terms of the environmental and economic benefits. Over

65% of local people believed that the mangrove forests could help improve livelihoods for local people, in terms of creating incomes and increasing aquatic resources. Both, local staff and people were highly appreciative of these aspects of the project. Local people also recognised that mangroves and other kinds of trees helped to change the micro climate in their localities and are now inspired to maintain and protect the trees. In Huong Phong and Vinh Phu communes, people saw that mangroves would provide benefits to aquaculture.

Planting mangroves fits well with the environmental policy framework set out in the priorities of the national and provincial action plans for natural disaster mitigation. The National Forestry Development Strategy for 2006-2020 and a provincial project called “Mangrove Restoration along the Coastal Zone in 2008-2015” have set the objective of planting 5 million hectares of mangroves along the coastal zone. This is identified as one of the most important environmental protection measures that would improve both disaster preparedness and foster economic development. The project also demonstrates that mangrove planting is well suited for local adaptation. Following on from this success in 2011 the ADAPTS project is continuing to enlarge its pilot mangrove plot in Con Te from less than 1 ha to 4 ha, with a higher level of local participation.

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# 5. DIALOGUE, DISSEMINATION AND UP-SCALING

## 5.1 Dialogue and up-scaling

The CSRD worked closely with local and provincial authorities to promote effective up-scaling of the local actions and priorities into policies at the provincial level. In May 2009, a provincial stakeholder workshop was held with the purpose of drafting initial first ideas for an adaptation action plan for Thua Thien Hue Province. During the project, the CSRD became recognised as having considerable knowledgeable about climate change and community based adaptation. As a result of this the CSRD was invited to sign a Memorandum of Understanding with the Environmental Protection Bureau (DONRE) to contribute to drafting the Provincial Action Plan. This represented an opportunity for CSRD to integrate the findings of the ADAPTS project into provincial policies and local planning. In April 2010, an Action Plan workshop was held with 50 provincial stakeholders and policy makers. CSRD and DONRE developed the second draft after the workshop and submitted it to the Provincial People’s Committee (PPC) in May 2010. It was approved and adopted in August 2010. The

plan is based on four sources: [1] findings from the field study and the recommendations of the ADAPTS project, [2] the National Target Programme on Climate Change Adaptation, [3] the Action Plan on Environmental Protection and [4] DONRE’s Action Programme on Natural Disaster Preparedness and Mitigation. The adopted version of the Action Plan contains many components that were proposed in the reports and documents written for the ADAPTS project, including the following.

- Implementing integrated water resource management
- Raising awareness and building capacity among authorities at all levels, from staff members of government agencies to communities, about climate change and risk reduction and how to approach climate change adaptation.
- Improving early warning systems
- Supporting measures that prevent erosion along river banks and the coast line

- Mangrove development and restoration, together with planting more trees and protecting forests in the upper basin area
- Building shelters for local communities
- Promoting the sharing of local knowledge and experiences on adaptation.
- Enhancing information exchange and cooperation and raising funds from foreign donors for projects, programmes and activities relating to climate change
- Establishing a network that has the function of coordinating and consulting inputs into decision making relating to climate change adaptation and water resource management in the province
- Establishing a mechanism for integrating climate change adaptation into socio-economic development at all levels

ADAPTS' experience in Vietnam shows the value of a bottom-up approach for instituting climate change adaptation. In December 2011, ADAPTS, PPC, DONRE and CSRD, jointly held a follow up workshop to present the Action Plan and to prioritise projects within the province. It was also an opportunity for other agencies to review their plans to promote climate change adaptation and disaster mitigation. Potential donor organisations were also invited, in the hope that they would be interested in supporting future activities. The workshop participants included international donors, representatives from national agencies, NGOs, provincial authorities and the media. Stakeholders reviewed the elements of the plan that had been already implemented and discussed how to mobilise resources to continue these activities in the future..

## 5.2 Dissemination and outreach

Considerable effort was put into the dissemination of results to relevant stakeholders in the basin and beyond. The study report and Action Plan were posted on the websites of Thua Thien Province, VUSTA (the Vietnamese Union of Science and Technology Association), the Vietnam River Network, Vietnamese Non Government Organisations and the Climate Change Network (VNGO & CC). Manuals on community-based adaptation strategies were developed and delivered to many people from different communities, local authorities and other organisations in the area. In addition, the outcomes of ADAPTS have been documented and printed in factsheets and shared with a wide audience through workshops, meetings.

The results of the project have been presented at national and international workshops and conferences, with the aims of drawing attention to the issues and mobilising resources.

In December 2010, the CSRD organised an outreach workshop for the Vietnam Rivers Network (VRN) with participants from around the country where ADAPTS' work in Vietnam was widely presented and discussed. One unexpected outcome of the workshop was the formulation of CentralNet for Adaptation, which will up-scale the approach of ADAPTS in the central region of Vietnam. In 2011, the Director of the CSRD presented the results of the ADAPTS' Vietnam project at



the 6th European South East Asia Conference in Gothenburg, Sweden, where she received additional invitations to make further presentations. One of these offers came from Oslo University (Norway), where the importance of bottom-up and knowledge sharing approaches is already well-recognised. Other presentations of the ADAPTS project, made by the CSRD, include a workshop organised by RMIT-VASS (the Royal Melbourne Institute of Technology – Vietnam Academy of Social Science). This workshop led to further cooperation in 2011 between CSRD, RMIT and VASS within a project funded by the Asia Pacific Network.

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## 6. SUMMARY AND CONCLUSIONS

The ADAPTS project in Vietnam achieved considerable results, in terms of knowledge development, local action, dialogue, dissemination and up-scaling.

The workshops, meetings and trainings, interventions and local actions considerably raised awareness of adaptation among the people and governmental organisations in the Huong River Basin. This project also provided a practical approach and concrete suggestions for local authorities to integrate climate change considerations into their planning processes and their policies. During the process, local experiences and adaptation priorities were explicitly taken into account.

The pilot of mangrove development is a positive example of how to get communities involved in increasing their resilience and to adapt to changing climatic conditions.

The project also had significant success in terms of promoting dialogue, dissemination and up-scaling activities. Real progress was made in policy advocacy and getting a wide range of stakeholders involved. The CSRD brought together specialised agencies, relevant departments, institutes and experts thereby connecting the needs and strategies of communities in the Huong River Basin with policy making processes at the provincial and national policy levels. These

included the national Target Programme for Climate Change Adaptation and the provincial Action Plan for Climate Change Adaptation. Moreover, the project developed good relationships with many networks (such as the Vietnam River Network, VNGO and Climate Change Network) and made use of many different channels (such as websites and visiting lectures) to disseminate the results of the project. This greatly enhanced the influence of ADAPTS and the CSRD in the climate change adaptation community in Vietnam.

We believe that the key factors that made these successes possible were the combination of a comprehensive policy analysis that identified the key stakeholders and relevant policy processes, and developing a thorough understanding of the needs of local people. Discovering the gaps between policy implementation and the needs of local people considerably contributed to the achievements of project. Furthermore, by making optimal use of available relationships with stakeholders from the authorities, local people, researchers and NGOs, ADAPTS created valuable avenues of cooperation, which helped open up dissemination channels and with financing and up-scaling. The creation of ownership among the participating local communities has been an important aspect in successful adaptation of concrete measures.

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## 7. REFERENCE LIST

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