

Design Document

Climate Change and Coastal Ecosystems Program (CCCEP)

in the Mekong Delta, Vietnam

Hanoi, 02 October 2010



The picture was taken in 2008 by Pham Trong Thinh. It shows a sluice gate in Vinh Chau District, Soc Trang Province. The gate was at the dyke 10 years before the picture was taken. Now it is 300 m from the current coast line indicating an erosion of 30 m per year.

gtz



Australian Government
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Executive Summary

Vietnam was identified by the International Panel on Climate Change (IPCC) as one of the countries to be most affected by climate change. In particular the deltas of Mekong and the Red River with their extremely high population density in low laying lands are threatened by sea level rise and the increase in the frequency and intensity of natural disasters such as typhoons, storms and floods. Further, the rapid population growth has resulted in a very high pressure on the natural resources of the inland and coastal areas which were of very high biological diversity. The Mekong Delta is known for its high agricultural productivity and is therefore called the “rice bowl” of the country. The Delta was once renowned for its rich and special biodiversity, especially in the coastal wetlands, mangrove areas and *Melaleuca* forests as well as the few remaining *Dipterocarp* forests. These are increasingly under threat both from population pressure and the effects of climate change. The overall environmental conditions are in an alarming state where water and soil quality is poor. The underground water level is constantly falling due to overuse and inadequate replenishment during the monsoon and upstream dam construction.

The Government of Vietnam, AusAID and the German Federal Ministry for Economic Cooperation and Development (BMZ) through the German Agency for Technical Cooperation (GTZ) have already started to work together in the Mekong Delta. AusAID commissioned GTZ in 2008 with the implementation of a biodiversity conservation project in Kien Giang Province in the Mekong Delta to adapt to and mitigate effects of climate change. The objective of the first phase was formulated as follows: The protected areas and coastal forests in Kien Giang Province are managed effectively. Based on the successful tri-partite cooperation in Kien Giang and on the tremendous need for further support in the Mekong Delta on issues of climate change the Government of Vietnam through different provincial authorities and the Ministry of Planning and Investment (MPI), requested further support from the German Government and AusAID.

A Concept Paper “Programmatic engagement in management and rehabilitation of natural resources in the southern Mekong Delta” was submitted by GTZ to AusAID in October 2009, which adhered to the expansion of support in Kien Giang to the Provinces of Ca Mau and An Giang. Further, the concept outlined the strategy to absorb existing GTZ projects in the Provinces of Bac Lieu funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and Soc Trang financed by BMZ to create a Climate Change and Coastal Ecosystems Program (CCCEP) in the region. This design document describes the framework and the major implementation elements of the CCCEP.

The core problem of CCCEP is: “Economic pressure, poverty, incoherent response to the new challenges related to climate change (mitigation and adaptation) and weak advisory capacities result in non sustainable resource use in the coastal and riverine wetlands, forests and protected areas. This has negative impacts on the protective functions and adaptation to climate change of mangrove forests, riverside vegetation and income generating opportunities for the local population.” The overall objective of the program is to achieve the efficient management and protection of coastal ecosystems for the mitigation and adaptation to environmental hazards related to climate change. The program will cover six components at the national policy level and in the five Provinces of Kien Giang, Soc Trang, Bac Lieu, An Giang and Ca Mau.

The program offers solutions to address the range of problems in the coastal ecosystems. The combination of the components form a CCCEP that is relevant throughout the Mekong Delta and for the development and implementation of a coherent and strategic policy and legal framework for adaptation to climate change in coastal areas. At provincial level support is being provided for the sustainable management of coastal zone ecosystems, the piloting of protection and rehabilitation measures, biodiversity conservation, promotion of sustainable income opportunities, incorporating climate change protection measures into decentralized planning, cooperation between provinces, capacity building and awareness within a province and participatory community development. At national level intersectoral coordination will be improved and mechanisms and capacities for a coherent management of coastal ecosystems regarding adaptation to climate change and poverty alleviation will be built up.

The current program budget is A\$32.813 million (21.657 million EURO) and it is proposed that AusAID contribute up to A\$23million (15.180 million EURO) over 5 years to the CCCEP. The program will start in January 2011 with German Government funds, subject to German-Vietnamese Government Negotiations in October 2010 (see page 14 for further detail). AusAID funding will start July 2011.

Acronyms

ADB	Asian Development Bank
AUD	Australian Dollar
AusAID	Australian Agency for International Development
BMU	German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
BMZ	German Federal Ministry for Economic Cooperation and Development
CC	Climate Change
CCCEP	Climate Change and Coastal Ecosystems Program
CE	Coastal Ecosystems
DANIDA	Danish International Development Assistance
DARD	Department of Agriculture and Rural Development
DED	German Volunteer Service
DONRE	Department of Natural Resources and Environment
DOST	Department of Science and Technology
DPI	Department of Planning and Investment
DPT	District Project Team
FPSD	Forest Protection Sub-Department
FSSP	Forest Sector Support Partnership
GTZ	German Agency for Technical Cooperation
GoV	Government of Vietnam
InWEnt	Internationale Weiterbildung und Entwicklung gGmbH
JICA	Japan International Cooperation Agency
KfW	German Development Bank
M+E	Monitoring and Evaluation
MARD	Ministry of Agriculture and Rural Development
MONRE	Ministry of Natural Resources and Environment
MPI	Ministry of Planning and Investment
NRM	Management of Natural Resources (Program)
NTP-RCC	National Target Program to Respond to Climate Change
PES	Payment for Environmental Services
PMU	Project Management Unit
PPC	Provincial People's Committee
PPR	Project Progress Review
PSC	Project/Program Steering Committee
REDD	Reducing Emissions from Deforestation and Degradation

SEDP	Socio-Economic Development Plan
TC	Technical Cooperation
UN	United Nations
UNDP	United Nations Development Programme
VND	Vietnam Dong
WB	World Bank

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1 Introduction

1.1 Understanding the impacts of Climate Change in the Mekong Delta

The Climate is changing worldwide and seeing impacts of this change are no longer a distant possibility as global temperatures rise and extreme weather events mount. The impacts include drought, coastal inundation and loss of biological diversity. As a peninsula country located in the tropical monsoon belt of South East Asia, Vietnam was identified by the International Panel on Climate Change (IPCC) as one of the nations to be most negatively affected by climate change.

Climate Change has already started in Vietnam. Fundamental climatic elements are changing and extreme weather phenomena occur more often including cyclonic storms, floods and droughts which are also becoming more severe. During the last 50 years, the annual average surface temperature increased by approximately 0.5 - 0.7° C, while the sea level along it's coastline has risen by approximately 20 cm, the frequency of cold fronts has decreased by 2.45 events and the tropical cyclone frequency has increased by 2.15 events per 50 years. ¹

Several climate change scenarios according to different emission rates of green house gases are developed for seven climate zones in Vietnam with the baseline period 1980-1999. By taking medium emission scenarios as a base it is projected that by the end of 21st century, the annual mean temperature in Viet Nam will increase in the range of 1.6° C to 2.8° C, the rainfall increase is likely to be 5% and the sea level is expected to rise about 75 cm compared to the period of 1980-1999. ²

Vietnam occupies about 331,688 square kilometres and has a coastline of 3,260 kilometres. Three quarters of its territory is covered by hills and mountains, while the plain areas include the northern Red River Delta and the southern Mekong River Delta. The lowlands are extremely fertile and densely populated. About 18 million people, which is almost a quarter of the total population, live in the coastal districts of Vietnam, though they cover only 16 % of the land area. ³

¹ Vietnam Assessment Report on Climate Change (VARCC), 2009

² Climate Change, Sea Level Rise Scenarios for Vietnam, June 2009

³ UNDP Human Development Report 2007/2008

Approximately 85 percent of the Mekong River Delta livelihoods are based on agriculture, fishing and aquaculture.⁴ The Mekong Delta, labeled as the “Rice Bowl of Vietnam”, is producing half of the country’s total rice production and is one of world’s richest agricultural regions. But the region is also known for its rich and special biodiversity especially in the coastal wetlands, mangrove areas, *Melaleuca* and few remaining *Dipterocarp* forest areas.

But rapid population growth and extended agricultural and industrial production have resulted in a very high pressure on natural resources and pose a threat to the biological diversity. The overall environmental conditions are in an alarming state especially where water and soil quality is poor. The underground water level is constantly falling due to overuse and inadequate replenishment during monsoon and upstream dam construction.

Severe impacts of changing climate in the region are already threatening people’s livelihoods as well as the ecological system. Due to abnormal rainfall changes, flood inundation and droughts occur more frequently. Coastlines are severely eroded and mangrove forests are reduced in area and density by stronger storms and sea level rise. Due to the degraded mangrove belt dykes are heavily eroded and not able to protect the agriculture land from salt inundation. The penetration of seawater into the mainland will worsen the soil degradation in costal areas, reduce habitats of fresh-water species and reduce the amount of water for people’s livelihoods and crop irrigation. If the sea level is continuing to rise at a rate of about 0.5-0.6 cm / year it will likely become the most threatening change to coastal habitats, infrastructure and agriculture areas in Vietnam.⁵

By trend the impacts of climate change in the Mekong Delta can roughly be predicted. However accurate evidence is still fragmented and has to be complemented by methodological sound research and analytical work. A number of institutions and organizations are currently carrying out analytical work on climate change impact and on fact based scenarios for the Mekong Delta but capacity and coordination is still weak.

Vietnam looks back on a long history of coping with natural disasters and mitigating their impacts particularly in the coastal areas. Due to increasing national and individual prosperity Vietnam’s capability to manage catastrophes and mitigate their effects should increase. However, at the same time, climate change is intensifying the impacts of disasters,

⁴ Vietnam Assessment Report on Climate Change (VARCC), 2009

⁵ Vietnam Assessment Report on Climate Change (VARCC), 2009

institutional capacity building and mitigation is weak and designing adaptation measures remains highly challenging.⁶

1.2 AusAID & GTZ: Working Together in the Mekong Delta

The Government of Vietnam, at the national level and provincial level in the Mekong Delta, is becoming aware of the tremendous economic, ecological and social challenges to be tackled in order to act appropriately against the impacts of climate change in the Mekong Delta. Furthermore, the Government of Vietnam and the international donor community increasingly realize that no single government institution, province, national organization or international donor alone can cover and solve all the problems of climate change in the Mekong Delta and, therefore, well coordinated efforts in the spirit of aid effectiveness are crucial.

The Government of Vietnam, AusAID and the German Federal Ministry for Economic Cooperation and Development (BMZ) through the German Agency for Technical Cooperation (GTZ) have already started to put this need for close cooperation into practice. The CCCEP is based on a concrete example of delegated cooperation where, in 2008, AusAID has commissioned GTZ with the implementation of a biodiversity conservation project in Kien Giang Province in the Mekong Delta to adapt to and mitigate effects of climate change. The first phase of the project will end in June 2011. The objective of the first phase was formulated as follows: The protected areas and coastal forests in Kien Giang Province are managed effectively.

Activities of the project have included the mapping of the existing forest cover and the survey of mangrove biodiversity. The project has generated interest in Reducing Emissions from Deforestation and Degradation (REDD), and increased awareness amongst key stakeholders in the importance of climate change, but also in new opportunities for conservation of biodiversity. The project has embarked on an awareness campaign using several means such as mass media, training and environment days and reaching a wide range of audiences. Several maps on coastal erosion have been produced. A range of livelihood activities has been supported with the aim of providing new income opportunities to local people. Livelihood activities were chosen so as to demonstrate options for multiple cropping and biodiversity conservation. Livelihood activities based on production of water melon, vegetable, fish, rice-shrimp rotation, blood cockle, coconut, Melaleuca and Mangrove timber, fruits and handicrafts were supported. In order to maintain and restore coastal forests and simultaneously improve livelihoods, the project works closely with the Coastal Forest

⁶ UNDP Human Development Report 2007/2008

Protection Section and the Dyke Protection Section of the Department of Agriculture and Natural Resources (DARD) in the implementation of a coastal forest management demonstration. Design and testing on construction of new fences to allow sedimentation areas which were eroding before, together with testing ways to optimize mangrove establishment in severe erosion areas has allowed planting of mangroves in difficult high erosion areas.

The Project Progress Review (PPR) took place in April 2010 and was carried out against the OECD DAC criteria. The review concluded that the Kien Giang project “strongly emphasized testing of innovative solutions in support of provincial priorities and plans, and responding to concrete provincial and national requests. It was therefore able to generate concrete, visible results in a relatively short time.” The PPR found that a “monitoring system was designed and implemented. Baselines were developed for the more quantitative indicators (forest area, biodiversity in the National Parks). It differentiates between strategic, performance and operational monitoring, with different frequency. The monitoring system is appropriate and easily understood and thus continuously being used and applied by project staff to inform the steering committee of the project on the progress made.”

1.3 The Climate Change and Coastal Ecosystems Program (CCCEP)

1.3.1 From Concept to Design

Based on the successful tri-partite cooperation in Kien Giang and on the tremendous need for further support in the Mekong Delta on issues of climate change the Government of Vietnam through different provincial authorities and the Ministry of Planning and Investment (MPI), requested further support from the German Government and AusAID. A Concept Paper “Programmatic engagement in management and rehabilitation of natural resources in the southern Mekong Delta” was submitted by GTZ to AusAID in October 2009 (attached as Annex 1). The concept paper adhered to the expansion of support in Kien Giang to the Provinces of Ca Mau and An Giang. Further, the concept outlined the strategy to absorb existing GTZ projects in the Provinces of Bac Lieu funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and Soc Trang financed by BMZ to create a CCCEP in the region. Following the development of this concept and in accordance with the high political priority and urgency of climate change adaptation efforts in Vietnam as well as the signing of the Joint Statement of Intent between AusAID and BMZ on 8th March 2010 the German Government pledged additional funds and requested GTZ to design a further initiative at national policy level to respond to the impacts of climate change

together with relevant national partners, which was highly appreciated by the Government of Vietnam.

Field missions were undertaken to address this request and the Concept Paper. In November 2009 a joint appraisal mission between AusAID and GTZ with the participation of MPI in the Provinces of Ca Mau and An Giang took place. In April 2010 another joint mission between AusAID, GTZ and MPI was carried out in order to review the progress of the project in Kien Giang, complete the appraisal in An Giang and elaborate recommendations on how to integrate these three provinces into the envisaged Climate Change and Coastal Ecosystems Program. In May 2010 a GTZ mission followed for the progress review of the project in Soc Trang and the appraisal of the national level policy and institutional development initiative in the context of the future programmatic approach. In all missions project members of the Province of Bac Lieu have been consulted for the purpose of transparency and coordination. The active participation of MPI and local government authorities in the appraisal missions of An Giang and Ca Mau as well as the review mission in Kien Giang indicates the high political ownership of the national program partners.

This design document comprises the findings and recommendations of the missions as well as various field visits by representatives of MPI, AusAID, BMZ and GTZ and describes the framework and the major implementation elements of the program. In the light of aid effectiveness it compromises the established working procedures of GTZ and the requirements of AusAID by referring to the general quality, design, management processes and impact of GTZ in Vietnam and defining the role of AusAID and GTZ for the design, implementation, monitoring and assessment of the program. Furthermore, it provides the framework and cooperation mechanism for initiatives of other international donor organizations in order to build up a multi-donor program in the Mekong Delta. CCCEP clearly puts the joint efforts of AusAID and GTZ into the lead of coastal ecosystems management for the international community in Vietnam and implies a high political visibility at the national and provincial levels. There is already a high visibility of the existing project in Kien Giang as highlighted by the recent media following a visit to one of the sites of the project for the Mid-year Consultative Group Meeting (refer attached press monitoring report, Annex 2).

The cooperation in Kien Giang is based on a Memorandum of Understanding between the German Federal Ministry of Economic Cooperation and Development (BMZ) and AusAID signed 9th February 2007 where the partners commit themselves to look for synergies amongst their activities in the Asia-Pacific region and ensure the exchange of experiences in

all fields of development cooperation. On 8th March 2010 AusAID and BMZ signed the Joint Statement of Intent in Hanoi (attached as Annex 3) which aims to strengthen the partnership between Germany and Australia in Vietnam. It follows the philosophy of *aid effectiveness* according to the Paris Declaration and Hanoi Core Statement from 2005 and is inherent to the Accra Declaration from September 2008. It safeguards effectiveness through ownership of local partners, alignment of donors along the national targets⁷, harmonization of procedures amongst the donors, delivery of measurable results and accountability of development results.

1.3.2 General Outline and Funding of CCCEP

The overall objective of the program is to achieve the efficient management and protection of coastal ecosystems for the mitigation and adaptation to environmental hazards related to climate change. The missions mentioned above designed six program components:

- (1) Capacity and Institutional Development for Integrated Coastal Ecosystems Management in the Context of Climate Change
- (2) Conservation and Development of Key Sites in the Man and Biosphere Reserve in Kien Giang Province
- (3) Integrating Adaptation to Climate Change into Planning for Coastal Area Management in Ca Mau Province
- (4) Water Management and Adaptation to Climate Change in An Giang Province
- (5) Management of Natural Resources in the Coastal Zone of Soc Trang Province
- (6) Sustainable Management of Forest Ecosystems for Coastal Protection in Bac Lieu Province

The components will cover the national policy level and five provinces. They offer solutions to address the range of problems in the coastal ecosystems. The combination of the components form a CCCEP that is relevant throughout the Mekong Delta and for the development and implementation of a coherent and strategic policy and legal framework for adaptation to climate change in coastal areas. At provincial level support is being provided for the sustainable management of coastal zone ecosystems, the piloting of protection and rehabilitation measures, biodiversity conservation, promotion of sustainable income opportunities, incorporating climate change protection measures into decentralized planning,

⁷ National Target Program to Respond to Climate Change; Ministry of Environment and Natural Resources (MONRE), Vietnam; December 2008

cooperation between provinces, capacity building and awareness within a province and participatory community development. At national level inter-sectoral coordination will be improved and mechanisms and capacities for a coherent management of coastal ecosystems regarding adaptation to climate change and poverty alleviation will be built up. The concept of CCCEP is built upon lessons learned from the running projects on coastal ecosystems management in the Province of Soc Trang and Kien Giang. The project in Bac Lieu has started recently so lessons learned are still limited.

The overall funding of the program comprises the total amount of 21.657 Million EURO (A\$32.814 million). The contribution of AusAID will amount to 23 Million AUD or calculated with an average exchange rate over the last six month, 15.157 Million EURO. Subject to German-Vietnamese Government Negotiations in October 2010, it is envisaged that BMZ will commit 6.5 Million EURO. It is envisaged that AusAID funding will commence in July 2011 to ensure that funding for 5 years is available. It is planned that activities funded by BMZ will commence in January 2011. The funding for the national component and the second phase of Soc Trang was already approved by BMZ. The component of Bac Lieu is in the internal approval procedures of BMU/GTZ with the possibility of funding of a second phase as of 2011.

1.4 National Context and Relevance to the Partner Country's Development Strategies

Vietnam has signed multi-lateral environmental conventions (UN Convention to Combat Desertification - UNCCD, Convention on International Trade in Endangered Species - CITES, Ramsar Convention on Wetlands - Iran 1971, Convention on Biological Diversity - CBD, UN Framework Convention on Climate Change – UNFCCC, UN Code of Conduct for Responsible Fisheries), and has developed national action plans for the protection of biodiversity, wetlands and the environment for the period 2001 – 2010.

The programmatic approach supports the implementation of the National Agenda 21, which has set the conservation of the sea, coastal areas, biodiversity, mitigation of the consequences of climate change and natural disasters, as its priorities for sustainable development. It is in line with Vietnam's Comprehensive Poverty Reduction and Growth Strategy of 2002, and the National Environment Protection Strategy 2001-2010, passed in 2003, which anchor the conservation and use of natural resources as essential elements within the Vietnamese environment and development policy. In December 2008 the National Target Program to Respond to Climate Change (NTP-RCC) was endorsed by the Ministry of Environment and Natural Resources (MONRE). Major components of this Program include

(1) Registering the effects of climate change on sectors, industries and provinces, (2) Identifying effective adaptation measures and their integration into socio-economic development plans and sector/province strategies, (3) Developing an appropriate political, institutional and organizational framework and (4) Building public awareness and the provision of capacities.

MONRE takes on the coordinating function for the NTP-RCC. Under the NTP-RCC all national sector ministries are obliged to develop and initiate action plans on climate change mitigation and adaptation in order to implement the NTP-RCC. Action plans for climate protection are either already available or in development for the respective sector ministries. The Ministry of Agriculture and Rural Development (MARD) as one of those and responsible for protection and management of mangrove forests, protection of biodiversity in forest ecosystems, dyke protection, aquaculture and so on has developed an Action Plan of Climate Change Mitigation and Adaptation already. Focus is given to (1) Ensuring the stability and safety of residents in cities and different zones and regions especially the Mekong and Red River Deltas and the central and mountainous areas, (2) Ensuring stable agriculture production and food security in an agricultural area of 3.8 million ha with two seasonal rice crops and (3) Ensuring the maintenance of dyke and infrastructure systems to meet disaster prevention and mitigation requirements. CCCEP will support MARD in the achievement of this plan. By supporting MARD with the implementation of its Action Plan of Climate Change Mitigation and Adaptation and as this action plan is an integral part of the NTP-RCC CCCEP will contribute to the implementation of the NTP-RCC. Further the national component of CCCEP will support MARD to disseminate lessons learnt and experiences to inform Government and the NTP-RCC. The National Action Plan for Protection and Development of Vietnam's Mangrove Forests until 2015, the National Forest Development Strategy and the National Dyke Rehabilitation Program are other strategic framework elements to which the program will contribute.

CCCEP is furthermore in line with the present National Socio-Economic Development Plan (SEDP 2006-2010) and the draft SEDP for the period 2011 - 2015. The SEDP (2011 – 2015) picks up climate change as an issue. However, in various discussions between Government and the international donor community it has been concluded that the mainstreaming of climate change in the SEDP requires more and appropriate consideration. It can already be predicted that one of the major tasks of the program will be to ensure that relevant climate change issues will be mainstreamed into the development of the SEDP 2016 – 2021. This, and the pilot development of improved governance mechanisms for sustainable resource

use, which is important for the entire Mekong Delta, are what make this programmatic approach so relevant.

Due to the robust and steady economic growth it can be expected that public resources together with ODA support on climate change will continuously increase the availability of financial resources. The biggest obstacle to implement measures against the impacts of climate change to the scale required is the challenge to build up necessary institutional, organizational and personal capacities. Therefore the Government of Vietnam has strongly requested the mode of delivery of technical cooperation in the area of climate change mitigation and adaptation.

2 Climate Change and Coastal Ecosystems Program

2.1 Problem Analysis

In the Mekong Delta intensive production of rice combined with the large-scale infrastructure of water control, the export oriented rapid extension of profitable aquaculture (shrimp farming), the inappropriate management of protected areas and of the remaining natural forests (in particular mangroves) as well as overlapping responsibilities of different authorities at various levels combine to aggravate the effects of climate change and jeopardize the ecological balance of the region. Thus conflicts of interest between economic development and the requirements of sustainable management of natural resources are not sufficiently dealt with. In succession economic pressure and poverty are increasing. This accelerates unsustainable utilization of natural resources enhancing negative impacts on biodiversity, protected areas and the coastal protection functions of mangrove forests. The fundamentals of income possibilities of the local poor population are further downgraded. Hence the core problem of CCCEP can be described as follows:

“Economic pressure, poverty, incoherent response to the new challenges related to climate change (mitigation and adaptation) and weak advisory capacities result in non sustainable resource use in the coastal and riverine wetlands, forests and protected areas. This has negative impacts on the protective functions and adaptation to climate change of mangrove forests, riverside vegetation and income generating opportunities for the local population.”

For the components of the program the appraisal and progress review missions defined the following problems:

- (1) Capacity and Institutional Development for Integrated Coastal Ecosystems Management in the Context of Climate Change: A regional network of the Mekong Delta Provinces in order to cope with the common challenges in the light of the expected impacts of climate change has not yet been established. A systematic, coordinated collaboration between provinces and with central government does not exist. Therefore the cooperation between authorities at national, provincial, district and the communal level as well as with residents of coastal areas must be implemented in order to achieve the joint development of sustainable solutions for the use of natural resources in coastal areas. Furthermore the cooperation between the existing projects in the Provinces of Soc Trang, Kien Giang und Bac Lieu is dissatisfactory. Although various national action plans and programs for the problem areas exist, the horizontal and vertical coordination in order to achieve a coherent inter-sectoral approach and steering as well as cooperation for the sustainable

management of coastal ecosystems is missing. MARD is responsible for the implementation of management and protection of mangrove forests, conservation of biodiversity, dyke rehabilitation and management as well as aquaculture. MONRE has the mandate to establish regulatory framework for biodiversity and protection against climate change. However the lacking coordination and cooperation between these two ministries remains a crucial problem.

- (2) Conservation and Development of Key Sites in the Man and Biosphere Reserve in Kien Giang Province: Economic pressure, poverty and the lack of knowledge result in non sustainable resource use in the coastal wetlands, special use forests, protected areas and their buffer zones and have negative impacts on to the coastal protection function of mangrove forest and income generating opportunities for the local population.
- (3) Integrating Adaptation to Climate Change into Planning for Coastal Area Management in Ca Mau Province: The rapid and vast expansion of shrimp ponds has led to the deterioration of coastal forests and to a substantial reduction in biodiversity. The effects of climate change are increasingly visible and this economic activity has lowered the resilience of the coastal ecosystems and reduced their capacity to adapt to the effects of climate change.
- (4) Water Management and Adaptation to Climate Change in An Giang Province: Changes in water flows in dry and flood seasons and inappropriate land use (in certain sites) have led to increasing problems with drought and flooding, water acidity and salinity in agricultural areas, affecting severely the livelihoods of people. Climate change will exacerbate the current situation. Faced with these changes which are interlinked between provinces and across levels within the province, the authorities have not yet found sustainable technical, planning and management solutions.
- (5) Management of Natural Resources in the Coastal Zone of Soc Trang Province: The functions of mangrove forests are threatened through unsustainable and management and illegal activities, which cause severe deforestation and degradation. Their protective functions are threatened and severe erosion on dykes and coastline can be observed in some areas of the coastline.
- (6) Sustainable Management of Forest Ecosystems for Coastal Protection in Bac Lieu Province: Resilience of coastal forests is not sufficient to withstand the impacts of climate

change in Bac Lieu province, increasing threats of flooding, damage from storms, and severely endangering people's livelihoods.

2.2 Lessons Learned

As projects are already running in Kien Giang and Soc Trang, the section below outlines the main lessons learned during the implementation and identified in review missions of the projects in these two provinces. The project in Kien Giang started in June 2008. The one in Soc Trang commenced its activities in March 2007. A review mission for Bac Lieu is forthcoming. And, as the activities in Ca Mau and An Giang have not yet started, there are yet no lessons learned from these two provinces.

2.2.1 Kien Giang

It is not easy to get well qualified administration and technical national officers to work in remote provinces as in general the density of well-trained staff in the provinces is lower compared to Hanoi or Ho Chi Minh City. In Kien Giang it took over one year to establish a strong project team. In some cases it was necessary to recruit without the required qualifications and allow them to learn on the job giving them the opportunity to gain the required knowledge in practical way creating necessary ownership and understanding. In Kien Giang local people and still second staff from local partner agencies have been recruited. These people are most likely to remain with the project for the long term and they are also likely to contribute to sustainability of project activities and approaches as they will continue to live in the province after the project is finished. Furthermore it is crucial to have committed staff with a high sense of ownership and at the same time a sensitive understanding of the local conditions in order to connect and transfer the project ideas and actions to local communities and other involved stakeholders. The Kien Giang project has been strongly supported by stakeholders including government officials and local stakeholders (e.g. Women's Union, youth union) and has helped to create awareness of the challenges posed by climate change and the value of biodiversity as stated by the last Project Progress Review. The recruited local staff has played an important part in contributing to these matters of facts.

Effective communication between the project and partners is a common issue. Seemingly simple tasks like getting reports to the responsible officers can prove to be challenging. In general most partners like to stay up to date with project activities but it is often difficult to meet on a regular and formal as well as informal basis. In Kien Giang it was therefore decided to request for a project coordinator on the partner side and at least one technical

project staff member who are able to communicate freely. This approach will be used as the standard in the CCCEP.

To improve the communication between the involved partners a monitoring system designed and implemented by the project is used to inform the steering committee on the progress made. Therefore baselines were developed for the more quantitative indicators (forest area, biodiversity in the NPs). It differentiates between strategic, performance and operational monitoring, with different frequency. The monitoring system is appropriate, easily understood and continuously being used and applied by project staff.

Project managers often experience a lag phase before partners begin to engage in project activities after the implementation agreement has been signed. In Kien Giang although the province was very supportive real ownership evolved during the first twelve months. The project team discussed design and approaches with the partners and involved them continuously in the implementation process. Furthermore the project always strongly acted in support of provincial priorities and plans, and responding to concrete provincial requests. So that now, after two years the partners show commitment and support, requests regularly for assistance and commit government funds to project activities. Due to the participatory approach the project has helped to create awareness of the challenges posed by climate change and the value of biodiversity. Acceptance of the problem and wide consideration in planning and management can also be considered as a result of continuously involving partner into the process. It is now a further indication of the sustainability of the activities undertaken by the project.

Provincial leaders have a huge work load and it is often to arrange formal meetings with them at short notice. In Kien Giang this has been overcome by organizing informal breakfasts before the working days start for the leaders. This has proved to be a very effective way to bring the project together to have exchange between departments as well as with the project.

2.2.2 Soc Trang

During project implementation technical lessons learnt include methods and instruments for participatory environmental management (co-management) and mangrove rehabilitation in the local context, sustainable aquaculture, and approaches for integrated coastal protection.

In addition, the project has made significant contributions to ownership and sustainability of the project interventions.

The report of the recent Project Progress Review says: “Methodological, technical and process related advice and qualification of staff from counterpart organizations have largely contributed to improved competencies in managing the complex problem situation in the coastal region. The introduction and dissemination of an inter-sectoral and participatory approach for the management and sustainable use of ecosystems in the coastal wetlands has been an innovative approach for all stakeholders involved ... The project now is in a comfortable situation that its innovative approaches and respective results are being demanded and used by both, the Province’s administrations and communities.”

This high level of ownership has been achieved through a process which put a lot of initial focus on capacity development (both for individuals and institutions). One of the main aims of the capacity development was to create acceptance as a precondition for the piloting of new concepts which were implemented in a participatory way involving all stakeholders. The project ensured knowledge transfer and was facilitating and steering the processes while the counterpart staff carried out the implementation of the activities. A high degree of ownership was created through this process, the participation of all stakeholders, and particularly through putting counterpart staff in the lead of activity implementation.

The project has put in place an effective steering structure comprising a multidisciplinary Project Steering Committee (PSC), a Project Management Unit (PMU) and multidisciplinary District Project Teams (DPT). The main task of the PSC is the coordination across sectors and institutions. The PMU is responsible for project management and provision of methodological, technical and financial support. Inter-sectoral DPTs collaborate with the PMU in coordinating and monitoring the implementation of activities in the districts. They also ensure effective and close collaboration with commune and village level. In addition, the project is working closely with other technical Departments and Sub-Departments at provincial and district level who have assigned staff to collaborate part-time with the project at province and district level.

Due to this organizational structure, the project has improved communication and cooperation between the institutions involved in the management of the coastal area. This integrated approach to coastal area management needs to be improved and institutionalized which is the objective for the second phase and aims to further build institutional capacity for integrated coastal area management in Soc Trang Province.

The project has also been establishing collaborations with national research institutes and universities to promote capacity building and transfer of practical skills. This will guarantee long-term support to the partner organization. The ownership, the multidisciplinary steering structure which will be institutionalized to become a body for integrated coastal area management, the involvement of research institutes and universities, and the development of financing tools which involve the private sector contribute to the sustainability of the project interventions beyond the life-span of the project.

Another important lesson learnt is that flexibility in project design enables projects to react in a timely manner to changing conditions. For example, coastal erosion and dyke maintenance/rehabilitation were not included in the project documents/offers of the Kien Giang and Soc Trang projects. Severe erosion was only identified as an important threat to coastal biodiversity and the livelihood of the local population once the projects had started. The fact that both projects did react flexibly and addressed this issue further contributed to ownership by the project partner.

For Soc Trang, the recruitment of a national expert is recommended to assist the manager in project management, administration and to facilitate further intensified knowledge transfer and networking with other ongoing projects and between the institutions and authorities involved in the project.

2.3 Program Objectives

The overall objective of the CCCEP effects in the Southern Mekong Delta is: Coastal ecosystems are efficiently managed and protected for the mitigation and adaptation to environmental hazards related to climate change.

To achieve the overall objective, the program has six components. The objectives of these components are:

(1) Policy, capacity and institutional development

Improved inter-sectoral coordination mechanisms and capacity at national and provincial level facilitate a coherent management of coastal ecosystems regarding adaptation to climate change and poverty alleviation.

(2) Kien Giang

To utilise the natural resources of Kien Giang Province in a sustainable way with effective management of the protected areas.

(3) Ca Mau

Efficiently manage and protect coastal ecosystems for the adaptation to environmental hazards exacerbated through or caused by climate change.

(4) An Giang

Improvement of water management in the agricultural landscapes and *Melaleuca* forests of An Giang Province to increase the resilience of the ecosystems to climate change, as a contribution to poverty alleviation.

(5) Soc Trang

Communities, relevant authorities and departments at all levels have increased capacity for multi-sectoral management of coastal wetlands and their adaptation to climate change.

(6) Bac Lieu

In Bac Lieu Province the ecological functionality of coastal forests and the livelihood of people depending on coastal forests are improved.

2.4 Anticipated Impacts, Estimated Indicators and Result Chain of the Program

2.4.1 Anticipated Outputs and Impacts

The program will provide the following major outputs:

- Methodological, technical and process oriented advice and capacity development of staff members of partner institutions and other stakeholders will result in a legal and institutional framework for coastal ecosystems for testing and application.
- Capacity Development, participatory planning approaches, the introduction of new and innovative management and financing mechanisms (REDD, PES) will enter into applicable planning and management strategies for coastal ecosystems.
- Data collection, surveys, capacity development, management plans and measures to establish biodiversity will make management tools for biodiversity conservation available.

- Community consultations, surveys of value chains and livelihood improvement measures enable the use of sustainable income opportunities.
- Data collection and sharing, development of maps and implementing rehabilitation pilots are applicable for up-scaling.
- An inter-sectoral cross-level coordination mechanism, policy advice, planning and coordination of harmonized measures of coastal protection in the Mekong Delta and the support of guidelines and regulations based on given project experiences will lead to improved communication, planning and cooperation between and among national and provincial government for up-scaling.
- Through the participatory involvement of community groups they will be qualified to apply co-management and benefit sharing tools.

These outputs will be used by government institutions, communities and other stakeholders to generate the following direct impacts:

- The responsible authorities at national and provincial level through the harmonized and coordinated approach avoid duplication of work and benefit from the best practices of the neighboring provinces.
- Improved cooperation between and among national and provincial governments will lead to coherent and improved coastal ecosystem management.
- The policy development, planning and management capacities of the national, provincial and district administrations will be improved with regard to the management of the natural resources.
- Stakeholders will have the understanding and capacity to effectively implement and enforce national level policy. The implementation will reflect the local conditions and needs of local people.
- Better planning and management, including co-management and benefit sharing, of coastal ecosystems together with new livelihood opportunities and implementation of innovative funding mechanisms will increase income alternatives and opportunities.
- Women and Khmer minority groups as traditionally (and observably) under privileged will especially benefit from the economic effects of the program interventions and this will strengthen their role in culture and society.
- The local population of the wetland areas of the provinces involved will sustainably manage natural resources (coastal and riverine forests, aquatic resources) based on contractual agreements and utilization agreements, which are developed jointly with the provincial governments with support of relevant national authorities.

- Protective mangrove belts and better designed and constructed dykes improves security (personal safety and livelihood) for the coastal population against the effects of climate change such as storm surges and inundation of salt water into agricultural land. Design of breakwaters to reduce erosion and increase sedimentation further contributes to this.

By achieving the direct impacts as mentioned the following indirect impacts can be anticipated:

- Coastal ecosystems area and biodiversity is maintained, increase of biodiversity in coastal ecosystems.
- Reduction of Poverty in the program region, increase of average income rates.
- Coastal ecosystems are adapted to climate change, protection against storm surges and flooding, gain of land through increased sedimentation.

2.4.2 Estimated Program Indicators

The achievement of the objectives of the program will be measured against indicators. This section provides details of the program level indicators. Each program component has its own indicators which are outlined in Appendix A. The indicators for the program will be:

- Climate change adaptation initiatives are incorporated into provincial planning processes and resourced under annual provincial budgets.
- The protection forest area (including mangroves, Melaleuca, etc.) in the targeted provinces is maintained at the same level compared to 2011 baseline survey data.
- Government resources for effective management of protected areas in the targeted provinces increase by at least 10% as determined by annual management plans.
- New innovative income opportunities generated by CCCEP (such as PES, REDD, co-management and benefit sharing contracts, sustainable aquaculture) increase the average income rates of the program target groups by 7.5 % compared to 2011 baseline data
- The awareness of political decision makers, staff of government institutions and local population about impacts of climate change has increased by at least 15% compared to 2011 baseline survey data
- A coherent national policy framework for coastal ecosystem management ratified by the Government of Vietnam is implemented

2.4.3 Result Chain

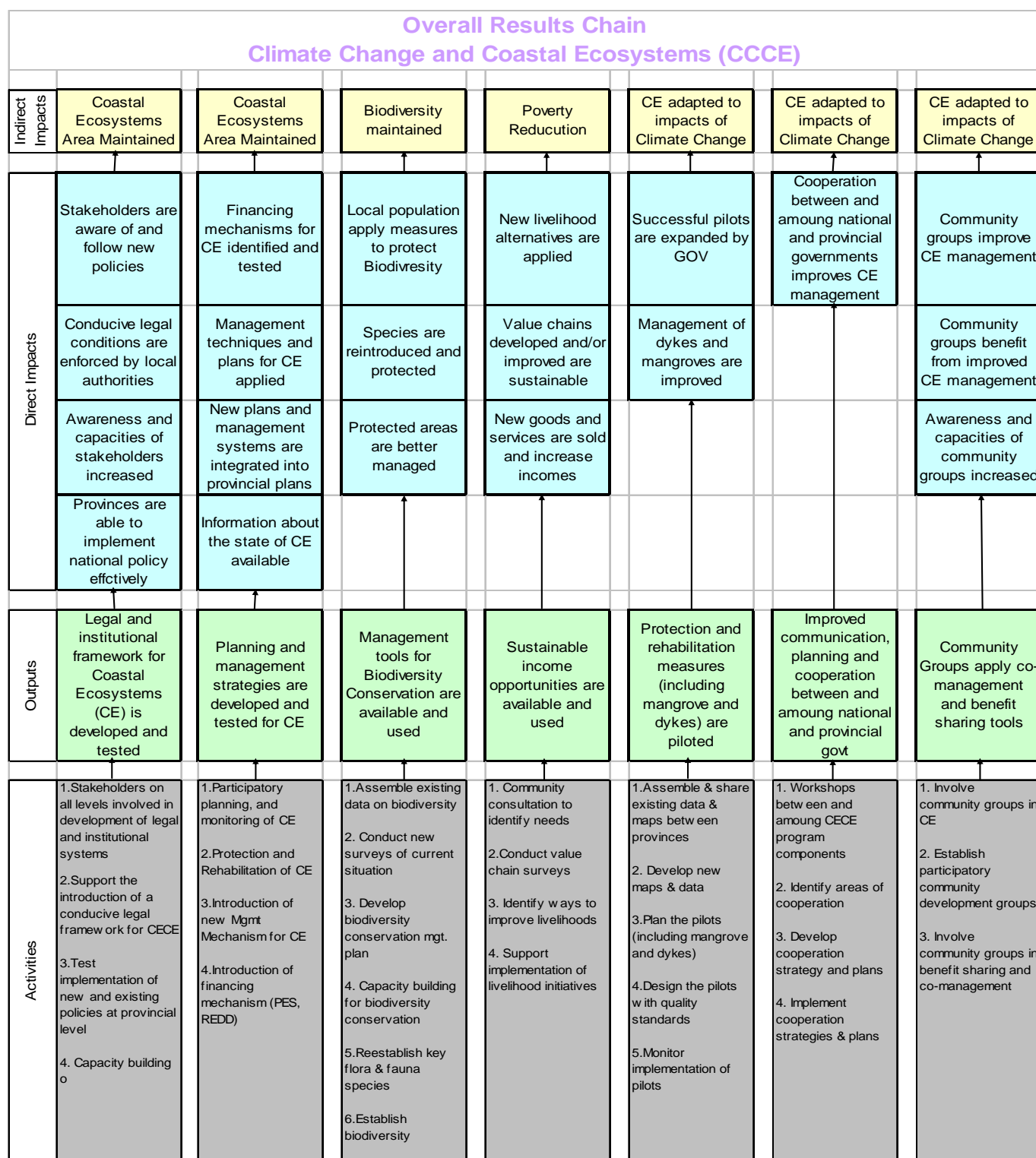


Figure 1: Results Chain of the CCCEP

The overall result chain (see Figure 1) of the CCCEP should serve as a basic coordination tool and as a major element of the monitoring and evaluation system. Each component should use this result chain for strategy discussions with and for reporting purposes to their

national partners. For further explanations of GTZ result chain systematic and definitions see Annex 4 GTZ Results-Based Monitoring Guidelines.

2.5 Geographical Dispersion

Figure 2, illustrates the provinces that the CCCEP would be active in. Although the topography of the focal area is rather homogenous, differences can be observed regarding, soils, vegetation cover, land-use, and water regime and sea currents. Nevertheless the programmatic approach addresses the area in question as one unit where parts of it cannot be developed in isolation. The best example is the management of freshwater reserves by improving the management of the existing vegetation cover and the water utilization schemes. This has to consider a geographic coherence where the proposed program will bridge the administrative boundaries.

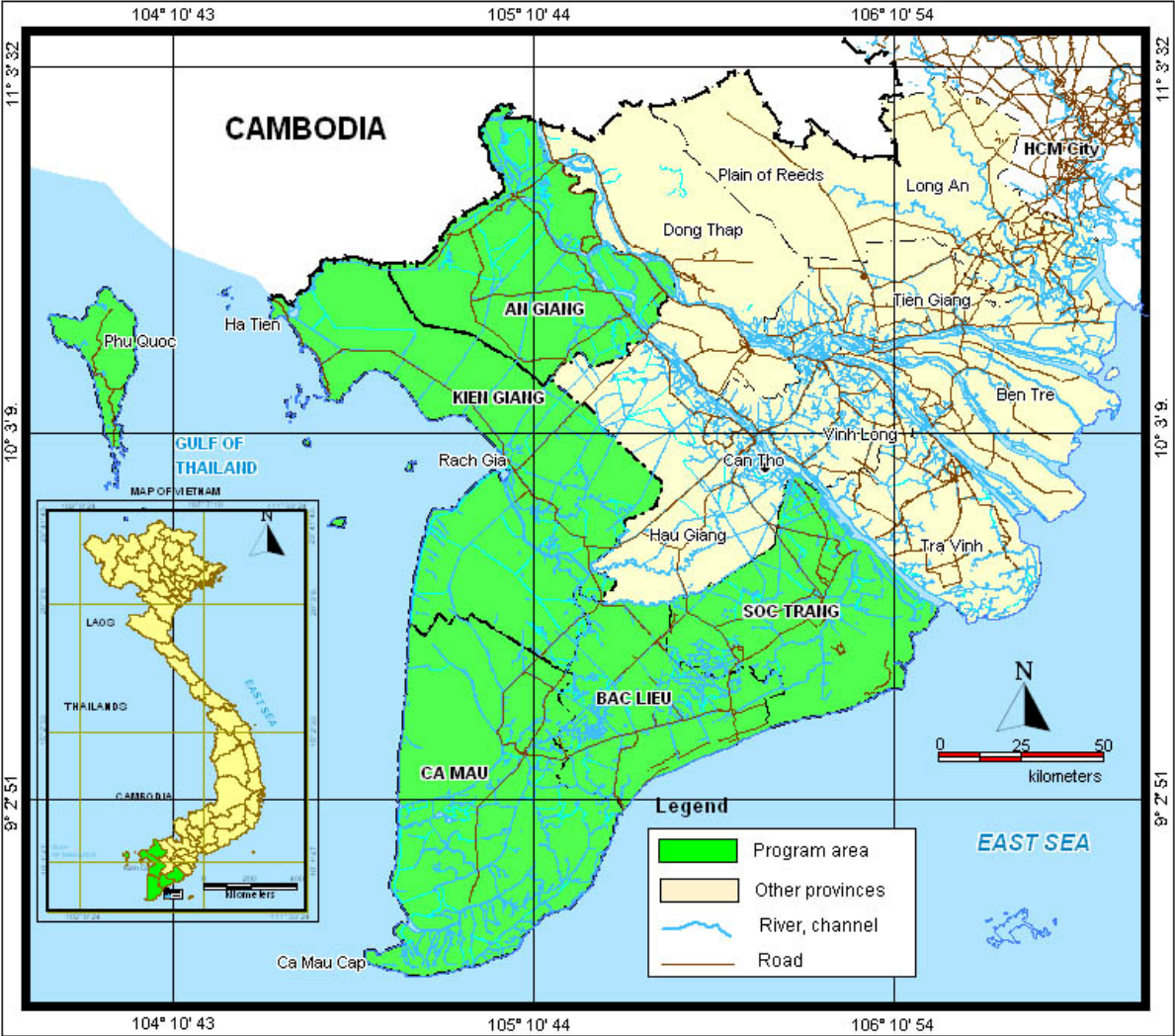


Figure 2: Map of Provinces with Indication of Program Focus

2.6 Subjects Covered by the Program

To address the existing challenges, as formulated in the core problem, seven major subject areas have been identified. Common to all of these subject areas is the objective of combating climate change effects. These subjects have a varying emphasis in each province. The emphasis for each province is based on the core problem identified in each province as well as a strategy to ensure different provinces are focusing on different issues. This will increase the impact of the program as the program plans to ensure lessons learned and knowledge will be shared between provinces and at a national level.

Program subject areas:

- 1) Support to legal and institutional framework
- 2) Planning and management of coastal zone ecosystems for climate change adaptation
- 3) Biodiversity conservation
- 4) Promotion of sustainable income opportunities
- 5) Piloting of protection and rehabilitation measures
- 6) Cooperation between Provinces and National Government
- 7) Participatory community development

The level of emphasis of each subject area in each of the provinces is outlined in table 1 with the main focus highlighted in grey for emphasis:

Component/ Subject areas	Support to legal and institutional framework	Planning & mgt. of CE for CC	Biodiversity conservation	Promotion of sustainable income opportunities	Piloting of protection and rehabilitation measures	Cooperation Between Provinces	Participatory community development
Kien Giang (Phase 2)	XX	XX	XXX	X	XX	XX	XX
An Giang (new component)	X	XXX	X	Potential for 2 nd Phase	Potential for 2 nd Phase	XXX	Potential for 2 nd Phase
Ca Mau (new component)	XX	XXX	XX	X	XX	XX	XX
Bac Lieu (Phase 1)	X	XX	XXX	XX	XX	XX	XX
Soc Trang (Phase 2)	XX	XX	X	XX	XX	XX	XXX
Policy, Capacity and Institutional Development (new component)	XXX	XX	XX	X	XX	XX	X

X = is part of the approach;
XX = is important for the approach
XXX = a main focus of the approach

Table 1: Emphasis of Program Components by Subject Area

The subject areas for each province are somewhat different. The proposed approach will consider the accrued thematic experience of all ongoing projects to avoid repetition and will embark on complementary activities to achieve the set of objectives. For example, comprehensive resources inventories as already established in Soc Trang and Kien Giang will not have to be designed from scratch in Ca Mau, but the existing designs could be easily adapted and scaled-up for the new provinces of the program.

Further, CCCEP will address the fact that analytical evidence for the impact of climate change in the Mekong Delta is still fragmented. CCCEP will carry out specific analytical work such as baseline studies, historical and actual erosion mapping, GIS mapping and impact assessment of different parameters, development and testing of models. CCCEP will also link up and cooperate with international, national and regional research institutions and organisations in order to develop a holistic evidence based scenario on climate change impacts in the Mekong Delta. A list of research actions to be implemented for the detailed design phase has been drafted and will be further refined. Opportunities will be identified and addressed in annual work plans.

2.7 Gender Equality

A study on Vietnam and climate change⁸ found that there has been little research on the gender dimensions of vulnerability to climate change, and on opportunities to strengthen both resilience to climate change effects and gender equality. It also observed that on first sight some policies related to climate change, social development and gender equality, for example, do not have any clear relationship. However, it is important to formulate both analytical and policy frameworks that create synergies between responding to climate change and pursuing social goals, such as strengthening resilience to climate change stresses and improving gender equality.

⁸ UN Vietnam (2009), Viet Nam and Climate Change: A discussion paper on policies for sustainable human development, Ha Noi Dec 2009

Another UN study on climate change and gender in Vietnam⁹ found that there is limited knowledge of gender and climate change, and limited analytical skills for policy formulation and actions related to equitable climate change responses.

The Climate Change and Coastal Ecosystems Program provides an opportunity to conduct research on the impact of climate change on gender equality; ensure policies are designed to address gender equality; and reduce barriers to women's participation in decision making on responses to climate change at the household and community level. The project will undertake several approaches to achieve this including first of all lessons learned from existing projects in Kien Giang and Soc Trang. Some of those can be summarized as follows:

(1) Kien Giang

The project in Kien Giang works closely with the women's union organization at the provincial level. A project survey identified women as the primary decision makers when identifying which agricultural based income generation activities the family will commit. It was also found that women earn much less than men for paid labor. The average monthly income of women in one commune surveyed is 300.000 VND/month (USD15.8/month). The Khmer minority were also found to be disadvantaged in terms of income generating opportunities. For these reasons an attempt was made to target poor minority women. 60% of beneficiaries of the project livelihood improvement program were women and 20% were Khmer. In total, these activities were carried out with the involvement of 109 households and covered 70 hectares. Only one activity has yielded financial results so far (water melons), and yielded an extra 8 Million Vietnamese Dong for one harvest (after 2.5 months) per household (net benefit). An enabling activity was training programs to prepare proper transparent, costed applications. The training targeted agencies and commune level groups (including Women's Union) to assist local people to apply for funding.

Kien Giang Province has a high incidence of AIDS and transmission is most common from mother to child. The Kien Giang project has contributed to awareness rising of the health risks associated with AIDS and began discussion of how to assist affected mothers who live in remote locations to have access to medication.

⁹ UN Vietnam (2008), Gender and Climate Change in Viet Nam – A Desk Review

The project involves the Women's Union, Farmers Union, Veterans and Youth Union in major activities such as the project awareness campaign which involves training, study tours and community awareness days (or example, clean-green day). This provides both gender and age equality.

(2) Soc Trang

In Soc Trang at the start of the project a detailed "Stakeholder analysis of natural resource use and a socio-economic survey" was carried out in the project area. This study identified women as primary stakeholders and the Women's Union as secondary stakeholders.

The study recommended focusing activities on the needs of Khmer minority group women and children of the coastal communities since they are both highly involved in natural resource collection. Natural resource use related activities carried out exclusively by women are processing of *Nypa* palm's leafs and collection of Blood cockles and Elongated goby by hand on the mudflats.

To address gender issues the project ensured that the women and the women's union participated actively in the co-management process. In the pilot site of Au Tho B village, women participated actively and some stood for election for chairlady for resource-user sub-groups. Gender issues are prominently anchored in co-management because women play an important role in implementing the co-management agreement and the applied co-management approach is focused on gender equity.

Activities in support of co-management such as the introduction of energy saving stoves in Au Tho B contribute to mangrove protection because there is less need for fire wood collection from the mangrove forests and are also gender relevant. Energy saving stoves significantly reduce cooking time as well as time for wood collection by women. This provides women with extra time and thus the opportunity, for example, for using their time to participate in income generating activities.

Implementation of additional gender specific interventions has already started, such as organizing the women in clam fishery cooperatives, and will be expanded and further intensified during the second phase of the project.

As for the other components accurate information is not yet available. A gender analysis will be conducted in late 2010 or early 2011 covering the six components of the program. For this study funds of GTZ are already available. This study will conduct analysis on the impact of climate change on gender equality, identify opportunities for the program to improve gender

equality, and identify opportunities for women to be involved in decision making, policy development and policy design. Recommendations from the gender analysis will be incorporated into the design of the program and its six components. The analysis, the incorporation of results into the design of the program and activities carried out will follow the instructions of GTZ's Gender Strategy 2010 – 2014 of GTZ (attached as Annex 5).

2.8 Sustainability

The GTZ mode of delivery is technical cooperation working within and through existing Partner structures. GTZ conducts program planning (AusAID: concept design) jointly with Partners. Once the program is approved, provincial and national government partners take carriage of the program's management, implementation, monitoring and evaluation. GTZ supports the program through professional advice, instruments, expertise, capacity building and access to networks. Working to improve the management of coastal ecosystems in order to strengthen the resilience of the Mekong Delta Region against the impacts of climate change requires a long-term approach. The implementation of CCCEP will be characterized by comprehensive capacity building (institutional, organizational, staff development), replicable model establishment suitable for up-scaling by relevant Government institutions across the Mekong Delta, strict monitoring, evaluation and mutual concept adjustments as well as gradually develop implementation capacities and hand over implementation activities to partners.

During implementation program Partners jointly assess progress, success, shortcomings and new emerging challenges on a continuous base. Based on the comparison to the outcomes of baseline studies at the start of CCCEP such as on institutional capacities of national and provincial government structures concept adjustments will enter into annual work planning. The CCCEP will be subject to regular review missions (see Table 1 in the DSID) that will assess the sustainability of the program along with criteria of relevance, effectiveness, efficiency and impact. Feedback from review missions will be incorporated into the design of the program to improve each of these criteria, the program concept will be adjusted accordingly and the appropriate phase out strategy will be determined.

CCCEP will act under the concept of sustainable development by considering economic, social and ecological aspects in an equal manner. Although the program is complex its experiences demonstrate a high commitment and ownership through the Government of Vietnam at national and provincial level. Through this approach the program will be in alignment with the political strategic framework and will support its implementation, refinement and optimization. Best practices and lessons learnt will be compiled to develop

instruments and approaches that government institutions (with the support of the program) will incorporate into official government planning and management tools for coastal ecosystems at all levels of Government which will be applied on a long-term perspective.

The program works towards a holistic approach in that it combines technical expertise, legal, institutional, organizational and policy support. A comprehensive and tailor made capacity development approach will be developed and implemented. The program at all levels will create awareness of the challenges posed by climate change and the value of biodiversity. Capacities of implementing organizations will be strengthened through training, provision of technical equipment, study tours, provision of surveys, maps, technical reports and assistance in managing natural resources into the future. Government officials and local stakeholders will be actively involved in planning, implementation and management of components resulting in ownership and support.

The program covers a broad range of subjects that have been identified as national and provincial priorities to address issues relating to climate change adaptation and mitigation in coastal areas. They address policy development and implementation, management, capacity building, livelihood improvement, biodiversity conservation, dyke rehabilitation and piloting of land management techniques. The program will test innovative solutions, feed in new ideas, and support processes from decision-making through to implementation. For example payment mechanisms for biodiversity management will be investigated such as PES and REDD. Through its work it will contribute to financial, environmental and social stability.

Coordination with different government institutions and relevant national and international stakeholders will take place in existing platforms such as the Forest Sector Support Partnership (FSSP) and the donor coordination group on climate change.

2.9 Risk Analysis and Mitigation

There are risks, which cannot be mitigated by the program such as that the impacts of climate change are more severe and arrive faster than expected and that competing economic and political priorities do not allow the project to implement the changes required. For the achievements of the program objectives the following key risks have been identified. It is furthermore explained how the program has been designed to mitigate these risks. Routine monitoring and updating of risks mitigation will be used as a key management tool by the Program Management. The risks identified that are specific to each of the six components are outlined in [Appendix A](#).

Risk: Responsible authorities do not make necessary resources for protection measures (e.g. rehabilitation of dykes, monitoring systems) available whereby measures financed by the components (e.g. technical structures for erosion mitigation/breakwaters, development of monitoring systems) become ineffective. Provincial authorities are not willing to scale-up successful pilots using government funds (moderate risk).

Risk Mitigation: Pilots will be selected to ensure that national and provincial funds are available for expansion. For example, funding is available for mangroves and dykes. Comprehensive capacity building and awareness raising measures will build up commitment to tighten bureaucratic procedures reducing this to a low risk. This strategy reduces this to a low risk.

Risk: Longer-term objectives of protection and sustainable management of natural resources are reset in favor of quick economic development. This conflict can be accelerated if for example current low global prices for shrimps will increase again triggering new investments for shrimp farms and destruction of mangrove forests for needed pond systems (moderate risk).

Risk Mitigation: The active involvement of local people in co-management and benefit sharing systems for protected areas (including mangroves) management will create direct benefits. Awareness building measures will demonstrate ecological but also economical benefits of intact mangrove belts and reduce risks for transformation to a low level.

Risk: Provinces as well as MARD and MONRE will not be willing to cooperate with each other, share information and build on lessons learned from each other (moderate risk).

Risk Mitigation: The Program Steering Committee includes participants from MARD and MONRE, provincial governments and scientific research organizations. This forum will provide information and opportunities for discussion to create political willingness for cross-level coordination. The program management design includes a Mekong Coordinator who will be responsible for the horizontal coordination between provinces reducing this to a low risk.

Risk: Inability to mobilize good quality Vietnamese project staff in the provinces in a timely manner (moderate risk).

Risk Mitigation: GTZ will draw on existing networks to identify potential staff; and use short-term national experts to supplement project staff reducing this to a low risk.

2.10 Implementation Strategy

2.10.1 Program Organisation Structure

The program is part of the Priority Area ‘Environmental Policy, Protection and Sustainable Use of Natural Resources’ of German Development Cooperation of Vietnam (see Figure 7). As demonstrated in Figure 3, CCCEP covers one of the three pillars of the overall GTZ Natural Resources Management Program beside Sustainable Forest Management and Conservation of Biodiversity. The Coordinator of the priority area on Environmental Policy, Protection and Sustainable Use of Natural Resources of German Development Cooperation also acts as the Program Coordinator of GTZ NRM Program. He organizes regular meetings of all staff members for steering purposes, monitoring and evaluation as well as to exchange, discuss and elaborate on strategic issues of common interest, experiences and approaches.

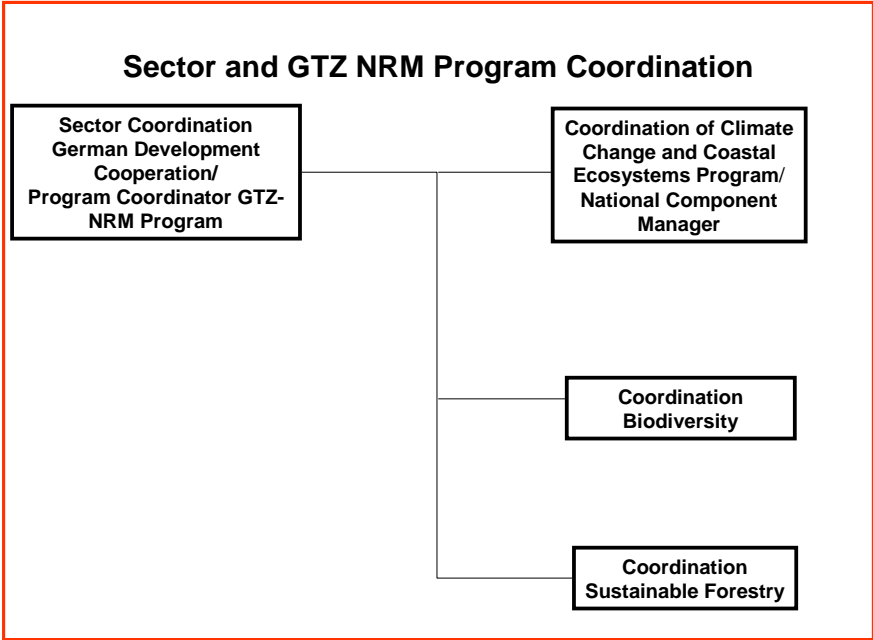


Figure 3: Sector and GTZ NRM Program Coordination

The CCCEP Coordinator will report within GTZ to the position of the Sector Coordinator and GTZ NRM Program Coordinator. This CCCEP Coordinator will also act as the National Level Component Manager. Figure 4 indicates that the CCCEP Coordinator will also report to the Program Steering Committee.

CCCEP will establish a Program Steering Committee at the national level. This committee will meet annually and provide political guidance to the program and its activities. It will serve as a platform for reporting on the implementation of the program and to exchange experiences, best practices and challenges at all levels. The committee will endorse annual work plans of the program and its components. The preliminary membership of the committee will include the responsible Vice-Minister of MARD, the sector coordinator/GTZ NRM program manager, decision-making representatives of MARD of concerning departments, Vice-Chairmen of PPC of the five provinces involved, a high-ranking representative of the Ministry of Environment, a representative of the academic community, a representative of AusAID and the CCCEP program manager. The program coordinator and national component manager as well as the five province component managers and the relevant national component directors will also be members of the Steering Committee and report through the program coordinator. The proposed membership of the Steering Committee is based on the extensive experience of GTZ program management in Vietnam. However the final composition of the committee is subject to the input from the Government of Vietnam which will be obtained if the program is approved.

A management structure has been designed in consultation with AusAID and the program Partners (see Figure 4). This structure will be implemented for the start of the program and, after 1 year of operation, it will be subject of a review to assess its workability, strengths and weaknesses. Adjustments will be made accordingly. The management structure of CCCEP will follow a two level approach (see Figure 4):

Program Coordinator and National Component Manager

The Program Coordinator will have the overall responsibility for a smooth and successful implementation of the program and its components. He/she will support the program in all problems which hamper implementation such as personnel, technical, legal and other problems that arise. The Program Coordinator should strive for the introduction and application of quality standards in the program components and for a consistent result based monitoring system. Furthermore he/she will provide conceptual orientation and budget monitoring. He/she will link policy development and implementation with pilots and bring lessons from pilots for inter-provincial coordination and national level policy development and coordination between national and provincial level. As the program will have high visibility at the national policy level, and within the international donor community the Program Coordinator will work close coordination with the Sector Coordinator of German Development Cooperation to coordinate with other donors on issues of up-scaling and donor

harmonization relating to climate change and coastal ecosystems. The CCCEP Program Manager will report to the Country Director of GTZ.

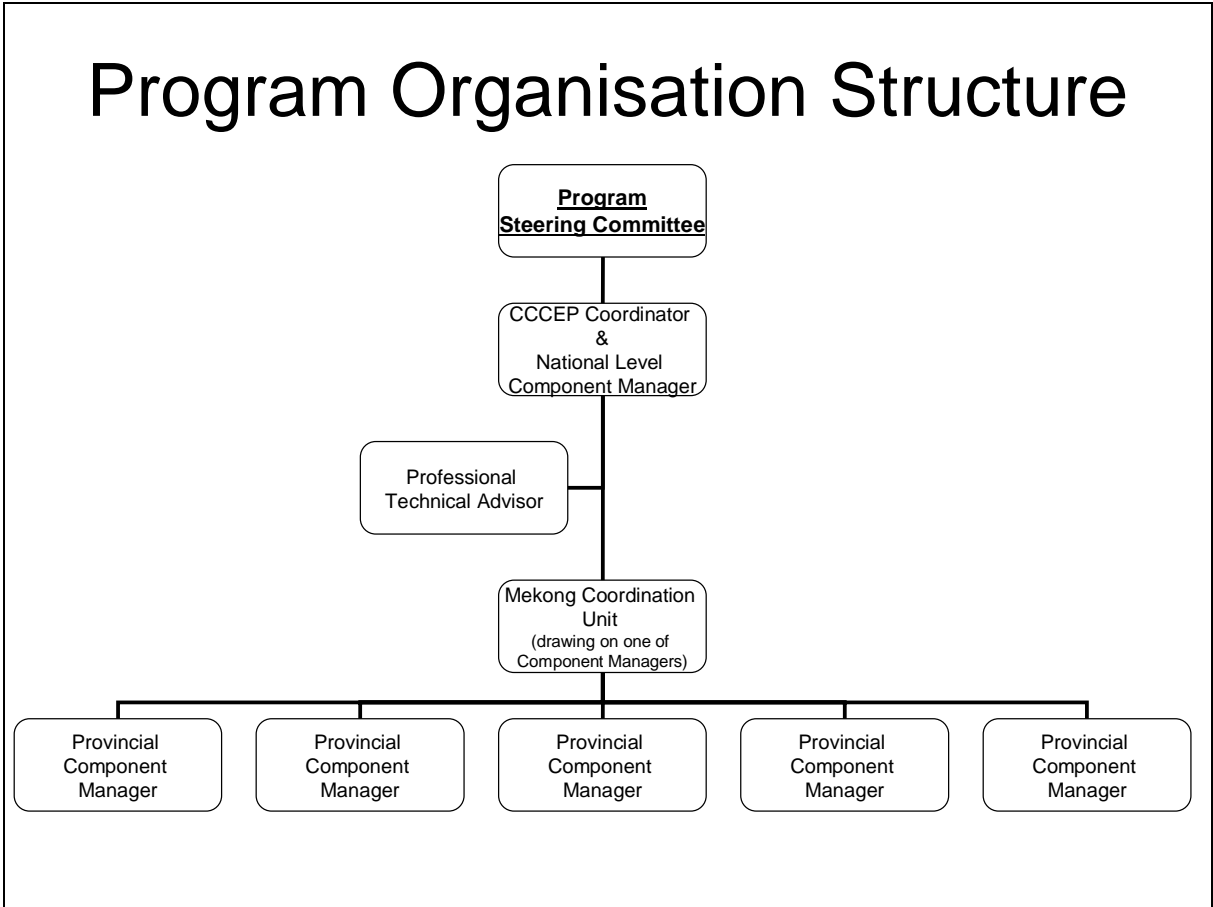


Figure 4: Climate Change and Coastal Ecosystems Program Organisation Structure

The Program Coordinator will also act as the Manager of the National Level Component. Each component will be implemented under the joint responsibility of the Component Manager and the existing partner implementation structure of GTZ approaches in Vietnam, i.e. consisting of its own Steering Committee, Project Management Unit including National Component Director, Component Coordinator, national experts and their relevant counterparts as well as national administration and technical staff.

Technical Advisor to Program Coordinator

The CCCEP Program Manager will be supported by a professional technical advisor. The technical advisor will be responsible for program information and knowledge management such as lessons learned, best practices and coordination of capacity building. This includes the design and application of a joint data base as well as surveys of common interest such

as gender, biodiversity, and water. Further subjects are planning for climate change adaptation, training and awareness in common.

Mekong Coordination Unit

The Mekong Coordinator Unit has the responsibility of horizontal coordination between the provinces involved. This includes the establishment of suitable coordination structures between provinces with a high degree of ownership by the provincial national partners. The Mekong Coordination Unit will also be responsible for internal coordination, communication and exchange of approaches, experiences, lessons learned and best practices. This will enable standard tools to be developed and incorporated into formal policies across multiple provinces and coherent planning and management for coastal ecosystems. The Mekong Coordinator Unit will also liaise and coordinate with relevant regional stakeholders such as other donor supported projects, relevant research institutions and civil society. The Mekong Coordination Unit will be headed by a coordinator. The coordinator will be appointed from one of the 4-5 CTA's in the provinces and will also act as the responsible Manager for one of the program components. He/she will report to the CCCEP Program Manager based in Hanoi. He/she will be supported by a coordination assistant. The other 3-4 CTA's in the Mekong will report to the Mekong Coordinator.

Provincial Component Managers

Each Province involved in CCCEP will have a Provincial Component Manager and a National Component Director in accordance with existing agreements between GTZ and the Government of Vietnam. The main role of the Component Manager is to manage and ensure the successful implementation on provincial level according to the objectives of the component. The Component Managers will work closely with the National Project Director for the planning, implementation and management of the component, provide advisory services, supervise international and national consultants as well as national staff and represent the program to third parties. As an example, the existing structure in Kien Giang is outlined in Figure 5. This shows there is a Provincial Steering Committee, a Component Management Board or Unit, national component coordination, professional and technical national staff and partners. Similar structures will be developed for each component with the Component Manager maintaining the flexibility to adapt the structure in accordance with their Partner Agency as per the specific requirements of their component. Figure 5 also shows the key partners for Kien Giang. Each component will identify its own key partners.

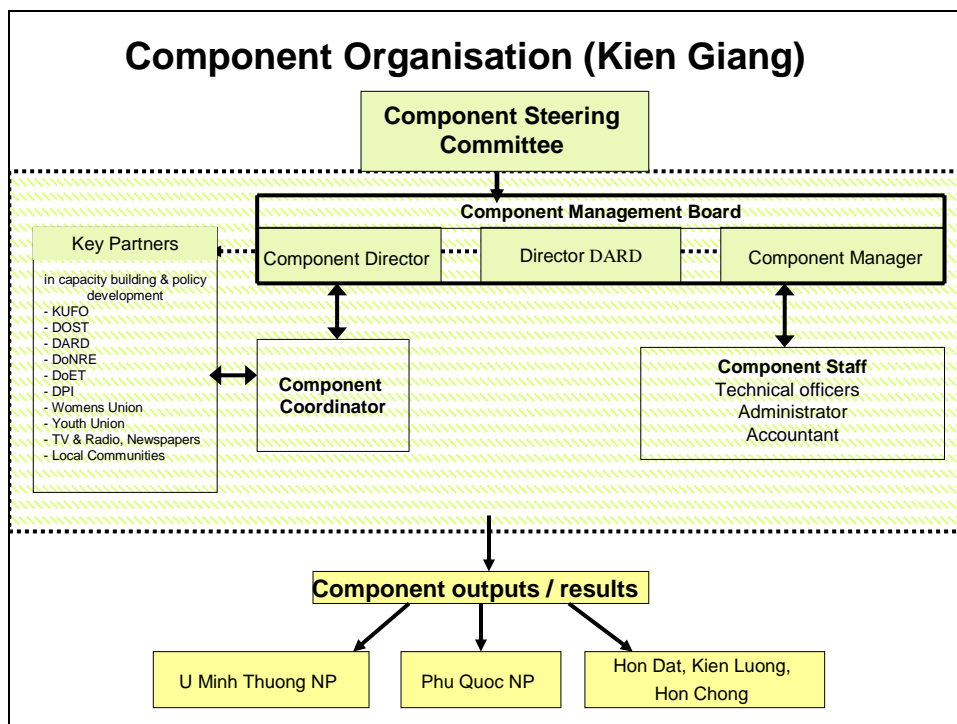


Figure 5: Kien Giang Component Organisations

The Project Coordinator provides a link between the program and relevant partner organisations including provincial government departments. Together with the Component Managers he/she is responsible for the implementation of component activities and staff participation in capacity building initiatives such as workshops and training courses.

The national staff will be employed to undertake technical and administration roles. Recruitment will be assisted by GTZ Human Resources Department in Hanoi. Position identification will be appointed at the discretion of Component Manager and National Component Director to achieve the objectives of the component they are managing. GTZ has a set of templates for job descriptions and profiles, including roles and responsibilities for Component Managers, to draw on when recruiting their team.

Further to personnel, Partners will provide offices, electricity and water to support the program component in their province and at national level.

The Provincial People's Committee (PPC) of each Province is responsible for:

- Appointing a Steering Committee Chairman and members
- Appointing the Project Director and Project Coordinator
- Attending and chairing Component Steering Committee meetings
- Attending Program Steering Committee meetings (coordinated at a national level)

- Authorising phase and annual implementation plans and activities
- Authorising requests for visas and for permission to visit project sites

The Component Managers of the provinces will report directly to the Mekong Coordinator. The Mekong Coordinator will report to the Program Coordinator in Hanoi. In coordination with the Sector Coordinator of German Development Cooperation and GTZ NRM Program Coordinator the CCCEP Coordinator will prepare program reports. The reports will be submitted to BMZ and AusAID on an annual basis. This report will allow AusAID to evaluate and monitor the progress and impact of the program.

2.10.2 Utilise GTZ Management Systems

GTZ has existing robust systems in place to manage the program. AusAID and GTZ funds will not be funneled through Government of Vietnam systems but be managed through GTZ financial and accounting system based in GTZ Office Hanoi. As all other GTZ projects/programs in Vietnam the CCCEP will utilize GTZ personnel in Hanoi specialized in financial management, accounting, internal control, tax systems etc. GTZ's internal regulations ask for internal program audits on an annual basis. The operational planning and management of the program will follow the GTZ management model for sustainable development "Capacity Works". All program components are required to follow GTZ's policies and procedures. Further details of GTZ's systems are available upon request.

The fact that project implementation is already being carried out in three provinces (Soc Trang, Kien Giang, Bac Lieu) means that considerable experience exists regarding design, planning of the implementation, and implementation of field and other activities, cooperation with relevant actors, set up of the Monitoring & Evaluation (M+E) structure, knowledge management and management of the project infrastructure (human resources, administration, finances and bookkeeping).

In Kien Giang a M+E system was designed and implemented (attached as Annex 6). Baselines were developed for the more quantitative indicators (forest area, biodiversity in the National Parks). The M+E system differentiates between strategic, performance and operational monitoring, with different frequency. The monitoring system is continuously being used and applied by project staff to inform the steering committee of the project on the progress made.

In Soc Trang at the beginning of the project, a baseline survey in the coastal zone of Soc Trang Province, livelihood assessment and stakeholder analysis was conducted which serves as a suitable and comprehensive basis and source of data and information.

A specific impact monitoring exercise was conducted as an overall assessment of living conditions and development challenges in selected villages and provided valuable insight into the poverty situation under the application of a specific tool called 'Method for the Assessment of Projects and Programs'. The 2009 data and information form the base-line for repetitions of this tool to assess the future impact of project interventions.

A comprehensive three level natural resources monitoring system is in place and uses: a) a high resolution satellite image remote sensing system for the monitoring of land-use changes, coastal erosion and changes in mangrove area coverage, b) a systematic mangrove forest monitoring program using randomly located sampling plots along transect and patrolling, and c) a community-based participatory system for the co-management area, which uses two indices (the amount of resources harvested and the effort required for the harvest of a defined quantity) to monitor the compliance with the co-management agreement as well as the sustainability of the resource harvest.

The Project assesses the very detailed annual plan of operations 3-monthly and reports to the Department of Planning and Investments (DPI) and the Project Steering Committee (PSC) through the implementing agency (FPSD).

Two major result chains were developed for i) the improvement of livelihood conditions and ii) the conservation of biodiversity. Both contain also the subordinate impacts on mitigation of the effects of climate change. The result chains allow for assessing the use of outputs (in particular capacity development) and impacts of the project.

CCCEP will develop a comprehensive M+E system for the program as well as for all single components based on existing systems of projects in Kien Giang, Soc Trang and Bac Lieu. The Results Based Monitoring Manual developed and used by Kien Giang follows GTZ's M+E guidelines (attached as Annex 4).

2.11 Partners for cooperation

2.11.1 Role of AusAID

Through its representation in Vietnam AusAID in coordination with the German Development Counsellor, GTZ Country Director and the Sector Coordinator of German Development

Cooperation will communicate with relevant Mekong Delta initiatives of other donors and Government institutions at the political level for harmonization and thus give overall guidance to the CCCEP Coordinator for donor coordination and harmonization. AusAID will be a member of the National Steering Committee of the program for overall political guidance together with national political partners. AusAID will receive an annual report on the status of implementation of the program including possible requests for action at the political level. AusAID will be invited to participate in GTZ review missions.

2.11.2 Role of Other Contributors

The current phase in Kien Giang and Soc Trang is benefiting from Australian Volunteers. It is envisaged that other Australian Volunteers will be identified to provide support to components as needed. It is planned that German Development Bank (KfW) will provide investment resources for dyke rehabilitation in the Mekong Delta involving local communities (details of provinces and amount of funding is still to be determined). KfW conducted relevant missions and is proceeding with planning of relevant measures. The German Volunteer Service (DED) expressed its interest to join the program by providing experts for specific tasks to be identified at a later stage. The „Coastman“ - Program of InWEnt Capacity Building International is a relevant training program, which is likely to be relaunched in 2012. This could be an important element for capacity development. Moreover, the alumni group of this program can be an important source of experts for the program in particular and the work at national level in general.

2.11.3 Provincial level

Due to its sub-regional relevance the program will address and involve national, provincial and district authorities of MARD, MONRE and MPI. On an implementation level, the Provincial People's Committees (PPC) will be responsible for oversight. Due to the different topics being dealt with, the technical responsibilities will involve a range of different provincial departments (see Table 2: Program Components and their Government of Vietnam Partners).

Project	Project Owner	Implementing Agency/s
Policy, Institutional and Capacity Development	MARD	MARD, DARD of relevant provinces
Kien Giang	PPC	DoST
Ca Mau	PPC	DARD
An Giang	PPC	DARD
Soc Trang	PPC	Forest Protection Sub-Department of DARD
Bac Lieu	PPC	DARD, supported by DONRE

Table 2: Program Components and their Government of Vietnam Partners

The linkage between MARD as implementation partner of the national level component and DARD as implementation partner for almost all of the provincial components is placed within the same line ministry and thus facilitates the coordination of the program among the provinces and between provinces and the national level. During discussions for the preparation of the program, MARD in particular raised interest in the strong bottom-up approach of in the program.

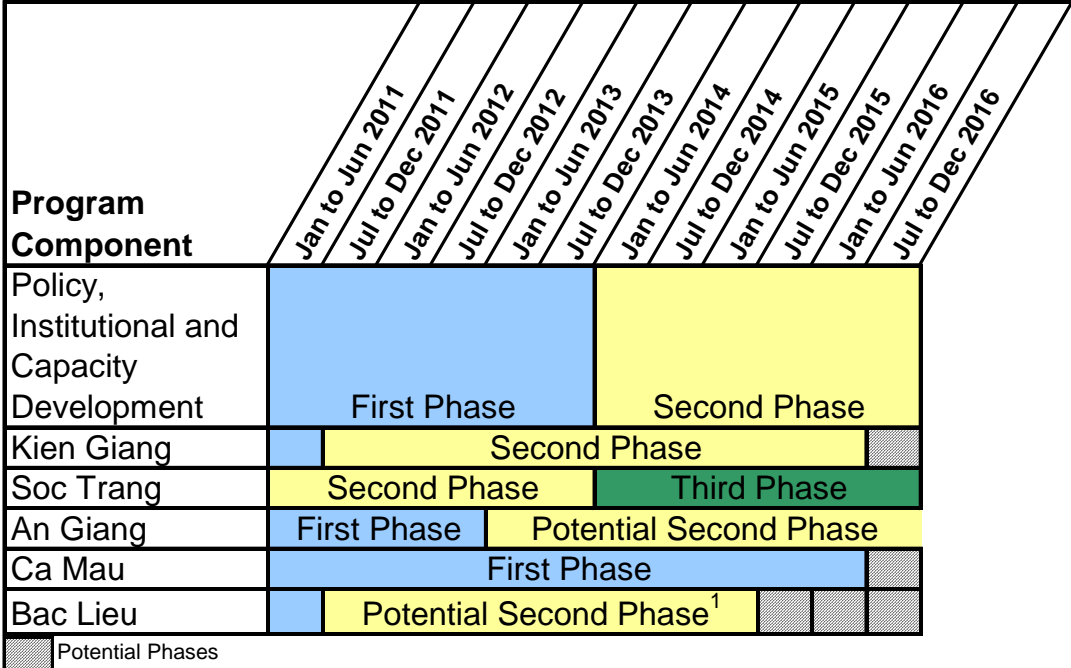
2.11.4 Other Donors

A very important issue is the commitment of German Development Cooperation and GTZ to cooperate with projects of other donors relating to natural resources management, so to assure not only a country-related networking but also a regional network. This enables the program to have a leverage effect outside of its area of interventions. So far in the Mekong Region, projects of other major donors are implemented in areas outside climate change such as ADB (infrastructure), WB (infrastructure and electricity), DANIDA (water sanitation), JICA (rural development), Korea (infrastructure), UNDP (poverty alleviation) and Netherlands (water sanitation). However because of the high exposure of the Mekong Delta to the effects of climate change a number of major donors are actually in the design stage for larger scale commitments in the Mekong Delta among them ADB and WB. The program will coordinate with donors in the planning stage of their initiatives. Through this possibilities for formal cooperation arrangements with other donors will be explored.

2.11.5 Timing of Program Components

It is envisaged that AusAID funding will commence in July 2011 to ensure that funding for five years is available. Approval of the national policy component by BMZ/GTZ is underway. It can be expected that activities at national level and provinces of An Giang and Ca Mau will commence in January 2011. The funding for the second phase of Soc Trang was already

approved by BMZ with the new phase to start in January 2011. The component of Bac Lieu is in the internal procedures of BMU/GTZ whereby the funding of a second phase in 2011 has been requested for. The first six months of An Giang and Ca Mau will be funded by GTZ (Jan 2011 – July 2011).



¹ Design and budget for second phase of Bac Lieu to be completed following review of first phase in late 2010.

Figure 6: Timing of Program Components

Figure 6 describes the different phases of the six program components. All six components will be operating in Jan 2011. The length of phases and finish dates differ among components:

- The policy component will have 2 phases beginning Jan 2011 and ending 31st July 2016. Phase 1 = 3 years, phase 2 = 3 years.
- Kien Giang completes phase 1 at the end of June 2011, phase 2 begins July 2011 and finishes end June 2016. Phase 1 = 3 years, Phase 2 = 5 years.
- Soc Trang begins phase 2, Jan 2011, potential phase 3, Jan 2014 and finishes phase 3 July 2016. Phase 2 = 3 years, phase 3 = 3 years.
- An Giang begins phase 1 Jan 2011 and phase 2, subject to a review, would begin in Jan 2013. Phase1 = 2 years, proposed phase 2 = 4 years.
- Ca Mau begins phase 1 Jan 2011 and finishes June 2016. Phase 1 = 5.5 years.

- Bac Lieu finishes phase 1 August 2011 and begins potential phase 2 September 2011.

The program will have a joint GTZ/AusAID progress review mission in mid 2013.

2.12 Co-ordination

2.12.1 GTZ's Approach in Vietnam

BMZ together with the Government of Vietnam has established a strategic framework of three Priority Areas: (1) Health, (2) Sustainable Economic Development and Vocational Training and (3) Environmental Policy, Protection and Sustainable Use of Natural Resources. These Priority Areas will support the Government of Vietnam's development policies and strategies outlined in sector strategy papers which guide all German development organizations. They provide the strategic framework for the programs of GTZ. As illustrated in Figure 7, GTZ's programs include Health; Sustainable Economic Development and Vocational Training; and Management of Natural Resources (NMR). The CCCEP is part of the NMR Program.

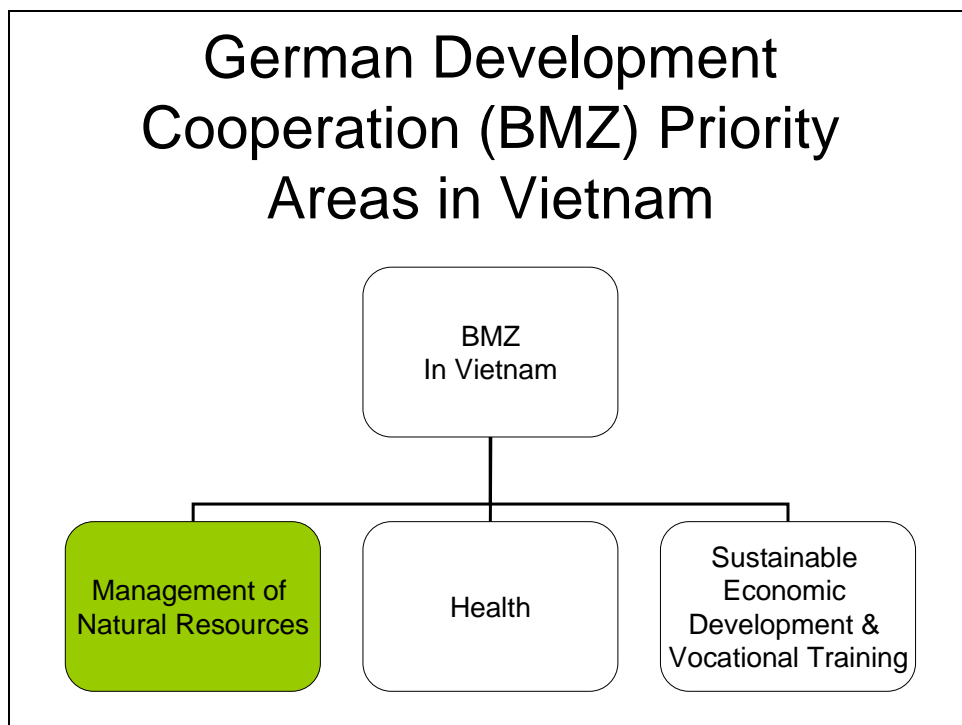


Figure 7: BMZ Priority Areas in Vietnam

Structurally the pillars of the NMR Program are linked through the alignment to the national strategies and programs mentioned in chapter 1.3 and to the FSSP. This partnership provides a platform for policy dialogue, coordination and information exchange between

different government institutions, international donor community, national and international NGOs and research institutions. The NMR Program presents results, lessons learnt and best practices to regular meetings, workshops and events of the FSSP at central and local level and in specific working groups and networks. The program coordinator of the NMR Program in Hanoi organizes regular meetings of members in order to discuss and elaborate on strategic issues of common interest, experiences and approaches in order to facilitate professional knowledge management and a successful implementation. The projects of the program work together on tools, regulations and best practices of joint importance. Thus it is guaranteed that experiences made at the local level are compiled and channelled into policy dialogue at national level and vice versa within the multi-level approach of GTZ and brought into an up-scaling mechanism. Examples are decentralised participatory planning and community forestry tools, forest land allocation regulation, co-management and benefit sharing approaches for natural resources management, regulations for sustainable forest management planning, tools for mangrove rehabilitation, legal framework for payment for environmental services, participatory resource use planning in protected areas and value chain approaches of different agricultural products and timber.

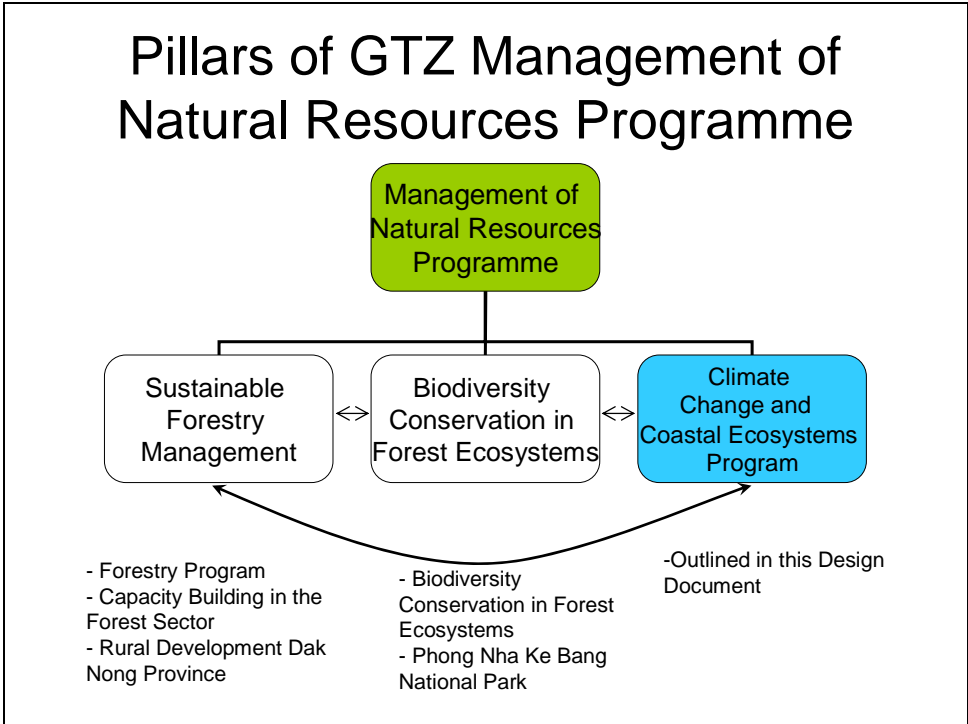


Figure 8: Pillars of GTZ Management of Natural Resources Program

2.12.2 Lessons Learned and Tools from other GTZ and AusAID Projects

Knowledge and tools of GTZ projects in Vietnam are available for use in the program. The “Tam Dao National Park and Buffer Zone Management” Project developed Strategic

environmental planning, capacity building and nature conservation planning. These tools will be further adapted at national level and specific pilot areas by the new project “Conservation of Biodiversity in Forest Ecosystems” as well as the National Park Project in the Phong Nha Ke Bang Region in Quang Binh Province. Methods for local participatory development planning and participatory resource management in particular forest land allocation and community forestry are available from the projects “Rural Development Dak Lak”, “Sustainable Management of Natural Resources in Central Vietnam” and “Environment Protection and Management of Natural Resources in Dak Nong”. The forestry program is engaged in the development of the strategic and legal framework for PES and REDD in Vietnam where the climate change and ecosystems program will be actively involved specifically for piloting and implementation. The current projects of Soc Trang, Bac Lieu and Kien Giang cooperate already with an initiative of the German Ministry of Education and Research for establishing a data system and providing satellite images for the Mekong Delta.

GTZ has a Sector Network in Asia on rural development. Members of this network are all GTZ projects and programs in the sector. Within the Sector Network climate change is a central issue and allows for GTZ projects do draw on relevant expertise on an ongoing basis remotely through the internet as well as personal interaction during sector meetings. This forum provides an opportunity to identify best practice and share lessons learned between countries.

AusAID is working in the Mekong Delta on infrastructure and water sanitation. The program will use the lessons learned from the AusAID project in North Vam Nao in An Giang province, which is now in a final testing stage (October 2008 – June 2010). An Giang Province will also coordinate with relevant projects implemented by NGOs, e.g. the “Community resilience to natural disasters project” executed by CARE.

Kien Giang is already linked with the Mekong River Commission and has presented a workshop on mangrove rehabilitation. The study project “Climate Change Impact and Adaptation in the Mekong Delta Project (Project Number: 43295)” funded by AusAID has Kien Giang as one of its focal areas. Part of the study will also cover issues related to Natural Resource Management, where the study will largely benefit for the design of future activities from the existing projects in Bac Lieu Kien Giang and Soc Trang, Ca Mau (JICA), An Giang (AusAID).

2.13 Program Budget

The overall budget will be jointly funded by the German and Australian Governments. The detailed program budget is outlined in Appendix B.

Appendix A: Outline of Program Components (extracts from field mission reports)

Kien Giang

Title of development measure	Conservation and development of key sites in the man and biosphere reserve Kien Giang, Vietnam
Project/program area	Kien Giang Province with its Man and the Biosphere Reserve, recognized by UNESCO in 2006.
Lead executing agency	Kien Giang Provincial People's Committee (PPC)
Implementing organisation(s) in the partner country	Department of Science and Technology (DOST)
Term	01/2011 - 06/2016
Core problem	Economic pressure, poverty and the lack of knowledge result in non sustainable resource use in the coastal wetlands, special use forests, protected areas and their buffer zones and have negative impacts on to the coastal protection function of mangrove forest and income generating opportunities for the local population.
Target groups / intermediaries	<u>The target group</u> includes the poor population who uses the natural resources of the coastal forests, wetlands and key areas of the Biosphere Reserve, as well as land users in the province. <u>Intermediaries</u> are local authorities, womens union and youth union, and the staff and Management Board of the Kien Giang Biosphere Reserve and its key areas.
Objectives and indicators	<p>Overall Project Objective is to utilise the natural resources of Kien Giang Province in a sustainable way with effective management of the protected areas.</p> <p>Phase 2 Objective. The protected areas and coastal forests in Kien Giang Province are managed effectively</p> <p>Phase 2 Indicators</p> <ol style="list-style-type: none"> 1. The area of coastal forests has not been (significantly) reduced below current levels 2. Biodiversity of coastal forests is managed effectively. 3. Preparedness of coastal areas for climate change is improved. 4. The concept of the Biosphere Reserve is understood and applied widely for conservation of biodiversity and increasing resilience to climate change.
Results chain(s) (from activities to the impact)	The project will use the lessons learned from the first phase of Kien Giang, from Soc Trang Project and Bac Lieu and share lessons with

<p>level)</p>	<p>provinces within the CC Program.</p> <p>Phase 2 Activity areas</p> <ul style="list-style-type: none"> • Baseline and new surveys, maps, studies will be produced on issues of management of coastal forests, biodiversity in key areas of the Biosphere Reserve and climate change impacts on natural resources. • New techniques and models for land and water use, promoting biodiversity and resilience to climate change, will be developed for replication by the province. • Support in trainings with follow-up will be provided in areas of management of the Biosphere Reserve, mangrove reforestation, promotion and effective management of livelihood activities. • Support to enable an effective and operational Biosphere Management Board. Capacity development and awareness raising on environmental and climate change issues in the Province will be supported. • The province will be supported in organising exchange on coastal management with its neighbouring provinces with a view to biodiversity conservation and climate change adaptation. • Awareness campaigns and knowledge management will be jointly implemented with the other provinces of the CC program to ensure wide applicability to different situations found in the south west of the Mekong delta. • Provide training and capacity building in biodiversity conservation in selected communities. These capacity building initiatives will work primarily through the WU at district and commune level. <p>Direct Impacts. Improved knowledge and understanding, skills and strategies for biodiversity conservation and natural resource management against the background of climate change. The stakeholders will use inputs and skills contributing effectively to the implementation of the concept of the Biosphere Reserve.</p> <p>Indirect Impacts. Natural resources of Kien Giang Province are utilised in a sustainable way with effective management of the key areas of the Biosphere reserve.</p>
<p>Risks</p>	<p>The mission identified one major risk to the sustainability of the project:</p> <p>Given the strong plans to develop Phu Quoc Island into a high class touristic destination, it may be that the central or local government may set priorities that will overrule parts of this project's intentions. To reduce this risk, the project is designed to strengthen the advisory role of the Biosphere Management Board and raise the profile of the UNESCO concept of Man and the Biosphere.</p>

Ca Mau

<p>Title of development</p>	<p>Integrating Adaptation to Climate Change into Planning for Coastal</p>
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measure	Area Management in Ca Mau Province, Vietnam
Project area	Ca Mau Province, with focus on Coastline of U Minh district, Production forest in West Nam Can district, Aquaculture production area in Ngoc Hien district
Lead executing agency	PPC
Implementing organisation(s) in the partner country	DARD
Term	07/2001 to 06/2016
Core problem	The rapid and vast expansion of shrimp ponds has led to the deterioration of coastal forests and to a substantial reduction in biodiversity. The effects of climate change are increasingly visible and this economic activity has lowered the resilience of the coastal ecosystems and reduced their capacity to adapt to the effects of climate change.
Target groups / intermediaries	<u>The target group</u> is the poor population that use the natural resources of the Ca Mau coastal forests, as well as land users in the province. <u>Intermediaries</u> are local authorities, and the staff and of Forest Protect Management Boards in target areas.
Objectives and indicators	<p>Overall Project Objective Efficiently manage and protect coastal ecosystems for the adaptation to environmental hazards exacerbated through or caused by climate change.</p> <p>Phase 1 Objectives</p> <ul style="list-style-type: none"> • Design and implement adaptation options to strengthen resilience of coastal zone ecosystems on which livelihoods of coastal population depend with focus on biodiversity, forest management, and aquaculture. • Integrate adaptation to climate change into multi-level, strategic and operational planning processes for the coastal zone in Ca Mau. • Strengthen knowledge exchange within and between provinces. • Transfer relevant experiences into the national planning processes. <p>Phase 1 Indicators</p> <ol style="list-style-type: none"> 1. Improved management of biodiversity, forests, and aquaculture leads to improved livelihoods 2. Integration of plans for adaptation to climate change into multi-level, strategic and operational planning processes for the coastal zone in Ca Mau leads to improved resilience of the coastal zone ecosystems 3. Improved knowledge and understanding, skills and strategies as a basis for sustainable management of natural resources

	<p>and knowledge exchange within and between provinces.</p> <p>4. Transfer of relevant experiences into the national planning processes and policy development</p>
<p>Results chain(s) (<i>from activities to the impact level</i>)</p>	<p>The component will integrate adaptation to climate change into provincial planning processes. Linkages will also be sought with other programmes in the Mekong Delta, and the Vietnamese Government Programme for Upgrading Dyke Systems Along the Coast from Quang Ngai to Kien Giang in order to facilitate the implementation of this planning. The component itself will execute pilot activities in order to test the practical effectiveness of the planned resilience building activities.</p> <p>Phase 1 Activity areas</p> <ul style="list-style-type: none"> • Protect and rehabilitate coastal zone ecosystems with a view to enhancing their biodiversity • Explore payment mechanisms for biodiversity management • Promote private sector involvement, for example for the certification and marketing of seafood products (e.g. eco shrimp, Marine Stewardship Council certification). • Collect, review and use of existing data on coastal geomorphology and hydrology, and impacts of climate change, identify gaps and facilitate commission of targeted studies (build on data developed by other provinces in the programme), interpret studies and data for practical application. • Provincial planning: Knowledge transfer and integration of recommendation for practical application of study results and experiences into provincial planning processes and policy formulation (focus on contributing to Coastal Protection Plan component of the provincial 5 year plan and District Management Plans). • Identify mechanisms to integrate responses to the effects of climate change into technical assistance and extension services of the province • Develop capacity on policy planning, as well as technically on sustainable forest management, biodiversity conservation, database establishment, monitoring, etc. • Awareness campaigns and knowledge management will be jointly implemented with the other provinces of the CC program to ensure wide applicability to different situations found in the south west of the Mekong delta. • Explore existing networks and facilitate exchange between provinces in the Mekong Delta and feed into national policies and planning. <p>Direct Impacts. This will provide improved knowledge and understanding, skills and strategies as a basis for sustainable management of natural resources against the background of climate change.</p> <p>Indirect Impacts. The coastal ecosystems of Ca Mau Province have increased resilience to climate change as a contribution to poverty</p>

	alleviation
Risks	Capacity of provincial officials is not sufficient to actively participate in the integration of new findings into provincial plans. Increase in shrimp prices leads to further immigration into coastal ecosystems.

An Giang

Title of development measure	Water Management and Adaptation to Climate Change in An Giang Province, Vietnam
Project area	Ca Mau Province low lying areas, with reference to <u>Binh Thanh commune</u> (salinity), <u>Vinh Gia commune</u> (salinity and acidity)
Lead executing agency	PPC
Implementing organisation(s) in the partner country	DARD with assistance for MoNRE
Term	07/2011 to 06/2013
Core problem	Changes in water flows in dry and flood seasons and inappropriate land use (in certain sites) have led to increasing problems with drought and flooding, water acidity and salinity in agricultural areas, affecting severely the livelihoods of people. Climate change will exacerbate the current situation. Faced with these changes which are interlinked between provinces and across levels within the province, the authorities have not yet found sustainable technical, planning and management solutions.
Target groups / intermediaries	<u>The target group</u> is local farmers, with special emphasis on womens' roles, as natural resource users. <u>Intermediaries</u> are DARD and authorities from selected districts and target communes who will ensure sustainability of the use of the resources. DoNRE who will be strengthened in effectively addressing sustainability of water allocation and land use.
Objectives and indicators	<p>Overall Objective: Improved planning and water management in the agricultural and Melaleuca forest areas of An Giang Province has increased the resilience of these ecosystems to climate change, as a contribution to poverty alleviation.</p> <p>Phase 1 Indicators:</p> <ol style="list-style-type: none"> 1. Understanding of water movement and water quality (acidity and salinity) in the two main rivers and selected canals of An Giang Province is improved 2. A basis is laid for cooperative and coordinated arrangements with other provinces for water management (especially Kien Giang) 3. Understanding and options for improved land use (agriculture and forests, especially increasing economic value

	<p>of Melaleuca) and water use in the provinces of the South-Western Mekong Delta region in the face of climate change are increased</p> <p>4. Capacity to integrate adaptation to climate change into selected multi-level, strategic and operational planning processes for the water management and land use planning in An Giang is improved</p>
<p>Results chain(s) (from activities to the impact level)</p>	<p>The project will use the lessons learned from the first phase of Kien Giang, from Soc Trang Project and Bac Lieu and share lessons with provinces within the CC Program. Modelling and studies will be conducted on issues of water availability, quality and management, land use and climate change impacts on natural resources. Capacity development and awareness raising of managers and planners in sustainable management of land and water in the Province will be provided and supported. The province will be supported in organising knowledge exchange and communication with its neighbouring provinces with a view to water management and climate change adaptation.</p> <p>Phase 1 Activity areas Water availability and quality:</p> <ul style="list-style-type: none"> • Adapt existing models developed by the Southern Institute of Water Resources Research to the local situation and use these to identify gaps in the data base and to identify areas where future environmental problems are likely to be most acute • Strengthen systematic communication on participatory planning and management of water flows across provincial boundaries • Strengthen institutional management capacities of local authorities from provincial to commune level • Identify first options for water management to improve and maintain ecosystems to support agricultural and fishery productivity, considering also existing climate change scenarios and other relevant dynamics • Select sites for interventions in the second phase • Transfer knowledge to integrate recommendations for practical application of study results and experiences into provincial planning processes and policy formulation • Identify mechanisms to integrate responses to the effects of climate change into technical assistance and extension services of the province <p>Direct Impacts. This will provide improved knowledge and understanding, skills and strategies as a basis for sustainable management of natural resources, esp. water, also against the background of climate change.</p> <p>Indirect Impacts. The agricultural and Melaleuca forest areas of An Giang Province has increased the resilience to climate change, as a contribution to poverty alleviation.</p>
<p>Risks</p>	<p>Not enough data of sufficient quality may be available in the time given in the first phase to adapt models to the local conditions and, as a consequence, derive meaningful interventions. This risk is of moderate</p>

	probability as there is good indication that these data exist and are accessible, in the opposite case this risk would be of low impact as the objectives and indicators cover a much wider range than just modeling.
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Soc Trang

Title of development measure	Management of Natural Resources in the Coastal Zone of Soc Trang Province
Project/Program area	Coastal areas of Soc Trang Province - Cu Lao Dung, Tran De, Vinh Chau, Districts.
Lead executing agency	Soc Trang Provincial People's Committee (PPC)
Implementing organisation(s) in the partner country	Forest Protection Sub-department (Department of Agriculture and Rural Development)
Term	02/2007 – 12/2013
Core problem	The functions of mangrove forests are threatened through unsustainable and management and illegal activities, which cause severe deforestation and degradation. Their protective functions are threatened and severe erosion on Dykes and coastline can be observed in some areas of the coastline.
Target groups / intermediaries	<u>The target group</u> comprises the local population, including the Khmer ethnic minority, who use the ecological resources of the Soc Trang coastal wetlands. <u>Intermediaries</u> are the staff of the departments responsible for the management of coastal wetlands at the provincial and district level, communal administrations, state women's organisations, interest groups and non-state organisations.
Objectives and indicators	<p>Overall Objective: the coastal wetlands of Soc Trang Province will be protected and sustainably used for the benefit of the local population.</p> <p>Phase 2 Indicators</p> <ol style="list-style-type: none"> 1. A legal and institutional framework for Integrated Coastal management (ICM) is jointly developed by technical departments and submitted to the PPC for approval 2. Stakeholder groups in the three coastal districts manage coastal resources on the basis of new co-management agreements signed with relevant People's Committees 3. In each of the three coastal districts at least one technical department provides new advisory services to coastal communities
Results chain(s) (from activities to the impact)	The project will use the lessons learned from the first phase of Soc Trang, from Kien Giang Project and Bac Lieu and share lessons with provinces within the CC Program.

level)	<p>Phase 2 Activity areas</p> <ul style="list-style-type: none"> • Establish strong networks with regional universities and research institutes. • Survey of intra-household gender and age issues to identify gender specific activities. • Assist disadvantaged women access loans. • Facilitate the development of a Code of Conduct for the Sustainable Management of Mangrove Forest Ecosystems. <p>Direct Impacts: The population of the coastal wetlands of Soc Trang Province manage mangrove forests and aquatic resources sustainably.</p> <p>Indirect Impacts: The adaptation of coastal ecosystems to climate change is improved; national measures and programs for inter-sectoral management of coastal ecosystems consider the results and methods developed in Soc Trang province; the ecosystem approach for the management of wetlands is also used outside of the project area; there is no further expansion of shrimp farms into the mangrove forests; small-scale shrimp farmers have improved access to the market through certification.</p>
Risks	<p>Increasing shrimp market prices may put pressure on mangrove forests through expansion of shrimp farming activities into the mangrove forests.</p> <p>National funding for infrastructure rehabilitation (dykes) fails to materialise.</p>

Bac Lieu

Title of development measure	Sustainable management of forest ecosystems for coastal protection in Bac Lieu Province
Project/Program area	Coastal areas of Bac Lieu province including the Bac Lieu bird sanctuary
Lead executing agency	Bac Lieu Provincial People's Committee (PPC)
Implementing organisation(s) in the partner country	Department of Agriculture and Rural development (MARD)
Term	04/2008 – 10/2011
Core problem	Resilience of coastal forests is not sufficient to withstand the impacts of climate change in Bac Lieu province, increasing threats of flooding, damage from storms, and severely endangering people's livelihoods.
Target groups / intermediaries	<u>The target group</u> is the people who live in coastal areas, particularly those who hold land titles in the buffer zone of protection forests. <u>Intermediaries</u> are the decision makers who manage the coastal

	resources of Bac Lieu.
Objectives and indicators	<p>Overall Objective: In Bac Lieu Province the ecological functionality of coastal forests and the livelihood of people depending on coastal forests are improved.</p> <p>Phase 1 Indicators:</p> <ol style="list-style-type: none"> 1. Improved biodiversity of selected Rhizophora-mangrove-plantations in buffer zones 2. Natural rehabilitation of the fully protected area close to specified communes 3. Enhanced vegetation, food supply and biodiversity within the Bac Lieu bird sanctuary 4. Improved integrated (incl. silvo-aquaculture) farming systems 5. Enhanced value chains for local producers and products 6. Improved environmental monitoring in the coastal zone 7. Enhanced capacity of local officials for coastal forest management 8. Increased availability of information regarding best-practices of coastal management
Results chain(s) (from activities to the impact level)	<p>The project will use the lessons learned from the Coastal Wetlands Protection and Development Project (CWPDP) that finished in 2007 and share them with the CC Program.</p> <p>Phase 1 Activity areas</p> <ul style="list-style-type: none"> • Coastal forest rehabilitation and biodiversity: Measures to diversify coastal forests are identified and specific measures for rehabilitating coastal forests are implemented. • Conservation of Bac Lieu bird sanctuary: The biodiversity of the Bac Lieu bird sanctuary is enhanced. • Working with coastal resource dependent communities: The way local communities use coastal resources is improved. • Institutional strengthening: The management capacities of relevant institutions in Bac Lieu Province dealing with mangrove forests, aquaculture, biodiversity and land use policies are strengthened. • Networking: Regional networks for coastal areas in the Mekong Delta together with other relevant organizations are established in order to learn from best practices. <p>Direct impacts: Coastal forest rehabilitation and enhanced biodiversity. Improved Biodiversity and Security of the Bird Sanctuary. Improved income for the coastal as well as marginalized communities. Institutional strengthening for coastal ecosystem protection. Proactive networking about and application of lessons learnt from stakeholders.</p> <p>Indirect impacts: Coastline protection measures are adapted to extreme weather events caused by climate change. Creating Biodiversity Hot Spots for future expansion. Rehabilitated and intact coastal ecosystems. Ensure environmental sustainability. Increased political prioritization of coastal ecosystem management within the Mekong Delta</p>

Risks	<p>Conflicting land use interests persist in coastal zones. In Bac Lieu, the main economic land use (aquaculture) needs to be balanced with coastal forest protection and afforestation. This is particularly important in the buffer zone.</p> <p>Should extreme environmental events such as a devastating typhoon hit Bac Lieu before planted trees are mature and forests diversified, the project's outcomes could be at risk.</p>

National and Provincial Policy

Title of development measure	Capacity and Institutional Development for Integrated Coastal Ecosystems Management in the Context of Climate Change (ICEM)
Project/Program area	National policy work in Hanoi with pilot activities in Mekong Delta provinces Ca Mau and An Giang and/or German/AusAID assisted projects in the Mekong Delta (Soc Trang, Kien Giang, Bac Lieu)
Lead executing agency	MARD
Implementing organisation(s) in the partner country	General Directorate of Water Resources in MARD
Term	10/2011-10/2016
Core problem	Economic pressure, poverty, incoherent response to the new challenges related to climate change (mitigation and) adaptation and weak advisory capacities result in non sustainable resource use in the coastal and riverine wetlands, forests and protected areas. This has negative impacts on the protective functions and adaptation to climate change of mangrove forests, riverside vegetation and income generating opportunities for the local population.
Target groups / intermediaries	<u>The target group</u> comprises the local population (including ethnic minorities and women) using the ecological resources of the coastal ecosystems. They include landless people subsisting on the collection of natural resources, and shrimp farmers. <u>Intermediaries</u> are staff of Ministries and their decentralized departments at provincial and district levels, women's organisations, interest groups and non-state organizations as well as staff from universities and institutes.
Objectives and indicators	<p>Overall Objective. Improved intersectoral coordination mechanisms and capacity at national and provincial level facilitate a coherent management of coastal ecosystems regarding adaptation to climate change and poverty alleviation.</p> <p>Phase 1 Indicators</p> <ol style="list-style-type: none"> 1. One intersectoral coordination body at national level together with one intersectoral body at regional level (e.g. Mekong River Management Board, or new body to be established)

	<p>have prepared and agreed upon decisions and regulations / guidelines for the protection and sustainable use of coastal ecosystems (verification: new regulations for the implementation of protection measures to climate change effects submitted to the responsible authorities at central and/or provincial level for approval)</p> <ol style="list-style-type: none"> 2. Instruments developed by projects (including the projects, Bac Lieu, Kien Giang and Soc Trang, An Giang, Ca Mau) for the management and protection of coastal ecosystems (co-management, mangrove rehabilitation and management, dyke rehabilitation, erosion control, protected area management, resource monitoring, etc.) are introduced as binding practices (verification: number of resolutions and guidelines with clear reference to the instruments developed by the projects). 3. MARD has strengthened its capacities and role in coordinating inter-provincial measures for the protection of coastal ecosystems in the pilot provinces (verification: development of inter-provincial programs on dyke rehabilitation, mangrove reforestation and management, erosion control, monitoring systems, etc.). <p>Phase one objective</p> <p>National authorities in cooperation with provincial authorities in the Mekong Delta Region have developed instruments and mechanisms for multi-sectoral management of coastal ecosystems based on best practices of projects.</p> <p><u>Indicators</u></p> <ol style="list-style-type: none"> 1. One intersectoral coordination body at national level together with one intersectoral body at regional level (Mekong Delta area) are established and functioning (verification: minutes on joint decisions, recommendations to central level, number of joint project proposals, proposals for further development) 2. Regional priorities for instruments and mechanisms (including priorities for financing mechanisms) of coastal ecosystems management and protection are agreed upon by provincial and national authorities and responsibilities for further development determined (verification: minutes on joint decisions, recommendations to central level, number of joint project proposals, proposals for further development) 3. Provincial authorities have submitted proposals for implementation of agreed and prioritized instruments and mechanisms for coastal ecosystems management and protection (verification: number of proposals submitted to relevant central ministries).
<p>Results chain(s) (<i>from activities to the impact level</i>)</p>	<p>At national level, the project focuses on strengthening the capacity, institutional and legal framework for intersectoral and coherent management of coastal ecosystems making use of the experiences from projects in the Mekong Delta region. The project will also provide advice to provincial authorities. Particular emphasis will be laid on climate change adaptation and poverty alleviation.</p>

	<p>Phase 1 activity areas</p> <ul style="list-style-type: none"> • Institutionalization, policy improvement for integrated coastal ecosystem management • Rehabilitation, protection and conservation of coastal ecosystems • Improvement of livelihood of local communities • Technology transfer, financing mechanisms and policy instruments <p>Direct Impacts: Provincial authorities in the Mekong Delta Region have effective instruments and mechanisms for multi-sectoral management of coastal ecosystems. Local populations will have improved livelihood opportunities.</p> <p>Indirect Impacts: Coastal ecosystems in the Mekong River Delta have increased resilience.</p>
Risks	<p>Some provinces consider short term economic gain of more importance than preparing for future climate change events and therefore, involvement by some provinces is limited. Not all provinces are willing to cooperate and share experiences and data; Not all provinces are willing to implement new measures designed by the component.</p>