

AQUACULTURE ADAPTING

Building a model of fisheries and aquaculture adaptating to climate change, working towards sustainable development aquaculture in Hoang Chau commune, Hoang Hoa district, Thanh Hoa province

PROJECT NO: CBA/VN/SPA/09/08





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AQUACULTURE ADAPTING TO CLIMATE CHANGE



BUILDING A MODEL OF FISHERIES AND AQUACULTURE ADAPTINGTO CLIMATE CHANGE, WORKING TOWARDS SUSTAINABLE DEVELOPMENT AQUACULTURE IN HOANG CHAU COMMUNE, HOANG HOA DISTRICT, THANH HOA PROVINCE.

Project duration:

- · Project no:
- Location:
- Implementation agency:
- Beneficiaries:

7/2010 - 7/2012

CBA/VN/SPA/09/08 Truong river islet, Hoang Chau commune, Hoang Hoa district, Thanh Hoa province Thanh Hoa Fisheries Association Aquaculture households in Truongriver islet, Hoang Chau commune, Hoang Hoa district, Thanh Hoa province



Truong river islet, Hoang Chau commune, Hoang Hoa district is a floating area located between the estuary of Ma river, south of East Sea and a small river branch, with an area of over 300ha. The local people's livelihood is based mainly on aquaculture. However, in recent years due to climate change impacts, aquatic resource has been seriously reduced, around 70% of the species and aquaculture production declined, 137 aquaculture households in Truong river islet meet many challenges and ineffective aquaculture. To help overcome the negative impacts of climate change to aquaculture, during 2010-2012, the GEF SGP Program supported the project entitled "Building a model of fisheries and aquaculture adapting to climate change, working towards sustainable development aquaculture in Hoang Chau commune, Hoang Hoa district, Thanh Hoa province" through testing models adapting to the impacts of climate change on fisheries and aquaculture in Truong river islet, a typical brackish water area of Thanh Hoa province, and working towards the sustainable development fisheries in Hoang Chau Commune.

THE CONTEXT AND OBJECTIVES OF THE PROJECT

Located in the southeast of Hoang Chau Commune, Hoang Hoa District, Truong river islet has an important location and significance for the fishery sector of the commune and Thanh Hoa province. It is only a floating area located near Lach Hoi but Truong river islet has a brackish water aquaculture area that accounts for nearly one tenth of total brackish water aquaculture in the entire province (the aquaculture area of Truong river islet is over 300ha).

In Truong river islet, there are five groups with 137 aquaculture households. Aquatic products include black tiger shrimp, shrimp, crab, seaweed... in which main products are only tiger shrimp and crab. The main crop is the spring-summer crop, from March to August, the secondary crop includes the rest months, raising is mainly for maximum collection. Aquaculture farmers often face a number of issues such as impacts of climate change, polluted water environment, risks of aquaculture and incomplete farming techniques.



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Identify and test suitable farming models, bring economic efficiency to the local people, and adapt to climate change and salt intrusion.

PROJECT SPECIFIC OBJECTIVES

Effectively plant, manage and exploit mangrove forests.

Strengthen organization of community, equip knowledge on environmental issues and climate change impacts on fisheries and aquaculture. Build capacity for the community through advocacy, training, workshops, maneuvers and experts' guidance. Conduct study tours to support and share experiences in communities for sustainable fisheries and aquaculture. Contribute to the protection, regeneration and rational exploitation of resources.

Contribute to the protection, regeneration and rational exploitation of natural resources.



MAIN ACTIVITIES AND INITIATIVES

Those who are profitable contribute an amount from the profits to a common fund to support the households, who are unprofitable, for borrowing money to continue production in the next crop.

> **Build capacity, raise awareness and organize community** including fisheries extension workshops, field workshops.

Develop pilot model, including:

- Fish farming adaptive seasonal model to avoid early May floods, and welcome summer crop

- Mixed farming model of shrimp and various crab species, ...to find the appropriate farming species.

 - Local fish farming model: goby (bống), bớp, seabass, etc.... **Improve farming techniques** to adapt to climate change impacts.

> **Develop a micro credit model** to address the risks in aquaculture.

Protect and regenerate natural resources through mangrove plantion and Crab bank models, stocking breedings to the sea (local people make simple cages, locating in or near mangroves. Whenever they catch crabs with eggs, they keep and put them in the cages, waiting for baby crabs thatch and run into the wild. Then they sell the mothers crabs.

Plant mangrove to protect the embankment and erosion control: about 20 hectares of mangroves are planted in several areas around the river islet to create a protective belt for the embankment, as well as to improve the environment and natural resources.

RESULTS AND EFFECTS

SUMMARY OF THE PROJECT RESULTS

The project has developed three models of fish farming with appropriate species and suitable farming methods, which were designed in consultation with experts and the participation and consensus of the aquaculture community.



- Train 10 technical classes, conduct five seminars and 14 community meetings. Hold two exchange and dialogue sessions on climate change impacts and adaptation measures with the participation of 1,092 turn/people.
- Mangrove forests are effectively planted, managed and exploited, the local people together with the local authorities have completed the development of management and protection plan of 180ha of previous forests.
- The community credit model was established in November 2011 with a total initial capital of VND 135 million, its contribution implemented in accordance with the Project Document.
- Natural resources were regenerated, the project has cooperated with Thanh Hoa Department of Aquatic Resource Exploitation and Protection in releasing a batch of shrimp breedings valued VND 40 million.
- Set up community groups to monitor the environment and protect mangrove and resources, and manage inlet water at the Hoang Chau culvert for the community's interests.

ENVIRONMENTAL EFFECTS

Mangrove forests are effectively planted, managed and exploited, the local people together with the local authorities have completed the development of management and protection plan of 180ha of previous forests.

The mixed aquaculture model has helped take advantage of the surplus feed in the ponds so that the pond environment is not polluted, and limit the risk and damage caused by unfavorable weather.

SOCIAL EFFECTS

Community awareness and capacity are enhanced. The aquaculture farmers have technical knowledge and successfully applied to increase spring-summer crop in 2011.

ECONOMIC EFFECTS

Compared with the non-project households, the project households participating in the shrimp and crab farming model have obtained higher economic efficiency of 130-160%.

POLICY EFFECTS

The project results are the practical basis to help the local authorities develop a climate change adaptation plan (interdisciplinary), including agriculture, fisheries, transportation, irrigation, etc

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01

The technical

process of the three

been developed and

completed after the

project plementation

phase, having a great effect on

the issemination, ommunication and

replication of the

models.

farming types has

02

The community revolving fund is still operating as usual and help farmers supporting each other in aquaculture

THE PROJECT SUSTAINABILITY AND REPLICATION

03

At present, **fishermen in entire Thanh Hoa province** are cultivating aquaculture very effectively with nearly 1,500 ha of the mixed farming model. 04

Community groups continue to protect the community's interests through monitoring the environment, protecting mangrove forest and resources, managing inlet water resources at Hoang Chau culverts



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