On behalf of:

Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety

of the Federal Republic of Germany

Implemented by:

ISPONRE Viet Nam

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

PARTICIPATORY IDENTIFICATION AND IMPLEMENTATION OF EBA MEASURES FOR PILOTING IN QUANG BINH

This factsheet informs about:

- the identification process and the pilot site
- the identified pilot measures and site implementation activities
- the aimed-for future impact

What has been done?

As part of the project 'Strategic Mainstreaming of Ecosystem-based Adaptation in Vietnam', the GIZ EbA project team, in cooperation with its partners ISPONRE and the provincial Department of Natural Resources and Environment, identified a pilot site as well as suitable EbA measures for gaining practical experiences with ecosystem-based adaptation in Quang Binh province.

Parts of the pilot site in Quang Binh province

The identification process functioned in a highly participatory manner, and was partly adopted from an approach to fast track implementation of adaptation measures suggested by USAID. It included i) conducting a rapid, stakeholder-driven screening assessment; ii) focusing on highly vulnerable resources, sub-populations and assets for the vulnerability assessment; iii) browsing a list of fast-track adaptation opportunities; iv) conducting the feasibility study of the most promising EbA options; and v) applying design criteria to select the most promising adaptation solution.

Key approach criteria at the design stage

- low initial and ongoing cost;
- effectiveness in reducing climate vulnerability;
- fast and easy implementation;
- co-benefits and limited disadvantages;
- flexibility and reversibility;
- optimization of local resources (i.e. labor force, ecosystem services and traditional knowledge);
- upscaling possibilities;
- sustainability in terms of economic, social and environment aspects.

The method

In Quang Binh province, an assessment study was conducted at four different ecosystems, namely mangrove forest, agricultural areas, forest on limestone mountains and coastal protection forest. A series of focus group discussions with local authorities and local people was carried out. Eventually, the coastal protection forest – one of the most typical ecosystems of Quang Binh province – was selected as the most suitable ecosystem for piloting EbA measures. A preliminary report was drafted based on the participatory identification to provide full rationales on the systematic analysis that was utilized for the selection process of the target commune, the village and the pilot activities that are being implemented now.

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Facts about the identification process

- four communes of Quang Binh were chosen for further analysis
- Hoa Binh village in Quang Hung commune, Quang Trach district, was finally selected for the EbA pilot implementation in a typical coastal protection forest ecosystem in Quang Binh province
- a list of potential EbA options was prepared; the most suitable measures were selected based on a scoring matrix
- coastal protection forest plantation (acacia and casuarina) was identified as the most potent adaptation measure; the forest is expected to function as a shield during extreme storms and droughts in the future
- a mapping exercise and forest planning were conducted to serve the identification of the pilot area
- at the same time, livelihood activities suitable for the natural conditions of the pilot site were also identified to support local people in increasing their income while they are engaged in the afforestation and forest protection

Facts about the pilot site

Quang Hung commune is a coastal agricultural commune in Quang Trach district, located 10 km away from the district centre and more than 50 km north of Dong Hoi city. With approximately 210,000 ha of natural land, the main economic sectors of the commune are agricultural production (mainly rice cultivation) and fishing (for cash income). The commune's main ecosystems are agricultural land, coastal protection forest, and plantation forest.

Besides income from inshore-fishing activities, other income sources stem from rice crops (on an area of approximately 350 ha) and vegetable crops (grown on about 120 ha). However, land area for cultivation per head is limited, and since a marine life disaster hit Quang Binh and the surrounding provinces in 2016, people's income sources have become even less stable.

The commune is located in the lowland and in an estuary, which results in it being flooded every year. In addition, agricultural and property losses occur regularly due to annual typhoons and droughts. At present, there exist four dykes in the commune. However, as these were constructed a long time ago, they are subject to natural degradation and thus do not constitute effective flood prevention tools any longer.

Hoa Binh village is among those coastal villages in Quang Hung commune that continue to rely on agricultural production and inshore-fishing as their main economic sectors. There are 705 households with more than 3000 people in the village, with 90% of local people's income being reliant on two rice crop varieties and inshore-fishing for cash. Quang Hung commune is also one of the poorest communes in Quang Trach district, and local people's current livelihoods are quite limited due to a lack of resilient and adaptable seedlings, insufficient technical knowledge and high unemployment (limited land for production).

The pilot site – Hoa Binh village, Quang Hung commune, Quang Trach district, Quang Binh province

The village experiences similar climate conditions as the rest of the commune, yet local people here are being affected more severely by strong winds and sand flowing during storms, tropical typhoons, floods during rainy seasons combined with sea-level rise, and also by droughts during hot seasons.

In the village's coastal area, protection forests (acacias and casuarinas) shall help protect against

sand flowing. Protection forests play an important role in protecting against flying sand, which otherwise covers farmland and residential land; in providing burning material and in reducing coastal erosion during stormy seasons.

The implementation

A group of 30 households was selected to participate in the afforestation and protection of about 10 ha acacia and casuarina coastal forest. This intervention focuses on areas suffering from soil erosion, moving sand as well as shortages of water that affect the livelihoods of local people. As part of and in addition to this, the following activities are conducted:

Awareness raising and formation of community forest protection groups

- awareness raising activities related to climate change and ecosystem-based adaptation were conducted for more than 150 villagers and selected households
- the 30 households selected for the piloting model formed 10 community forest protection groups
- the groups were supported in the development of community forest protection regulations and an intensive forest protection plan by technical consultants

Coastal protection forest plantation (acacia and casuarina species)

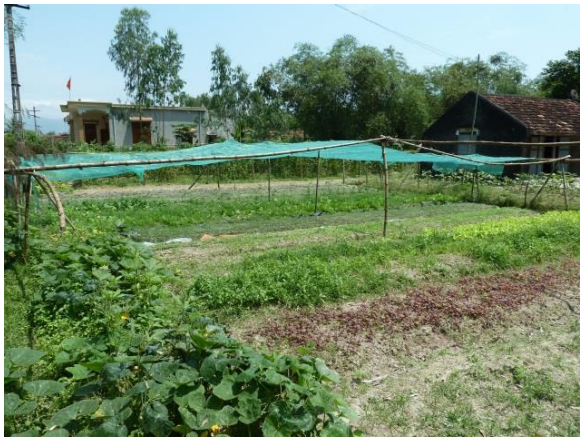
- through a mapping exercise and forest planning, an area of 10 ha was defined and agreed upon for afforestation activities
- technical training on forest plantation in coastal forests was conducted for 30 selected farmers, and acacia seedlings as well as microbial fertilizer were provided to farmers for utilization on an area of 5 ha
- 5 ha of acacia were planted (inner area near residential places of communities)

Acacia plantation in coastal protection forest in Hoa Binh village, Quang Hung commune

- the plantation of another 5ha casuarina forest (outer area near the sea) will take place in September 2017
- the forest protection groups have carried out protection activities and are taking care of the plantation forest, being actively supported in their efforts by the whole community
- periodical monitoring and advice are provided to selected households

Alternative livelihood activities

- baseline data surveys were conducted at household level for at least 30 selected households, whilst production plans, types of livelihoods as well as business-suitable seedlings and breeds were simultaneously discussed and advised upon



The new vegetable gardens

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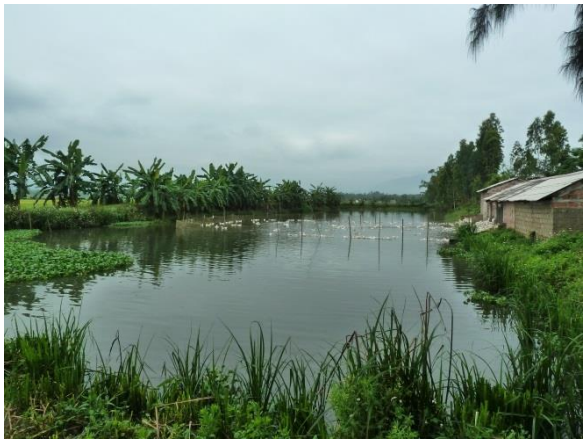
- three types of alternative livelihood activities were identified for the 30 selected households; these alternative livelihood activities are cow breeding and grass cultivation, fish farming and vegetable gardening
- technical training courses and advice on cow breeding and grass planting techniques, freshwater fish raising and vegetable cultivation were conducted for selected households (10 households per livelihood)
- seedlings, breeds and production inputs for the new livelihood activities were provided (including fertilizer, grass seedlings, fish breeds, vegetable cultivation essentials, production tools, essentials for the building of stalls and ponds; cow breeds etc.)
- the selected households are working with their new livelihood activities; some could already harvest for the first time



Fish ponds have been filled with freshwater fish

Expected ecosystem services and benefits of the implementation

The pilot activities are expected to provide the following benefits:

Year 1:

First grass harvest (cow fodder)

Annual income from vegetable crops and fish breeding

Year 2:

First calves from cow breeding bring income

Improved soil nutrient status through diversified vegetable species

Improved technical skills and knowledge through training and guidance

Raised awareness on climate change and climate change adaptation as well as capacity to respond to its impacts

Year 3:

Annual income from cow raising

Annual income from vegetable crops and fish breeding

Year 5:

Through protection forest plantation:

Increased soil moisture

Improved groundwater availability from sandy soils through forest plants and increased canopy cover

Reduced impacts of strong wind and sand flowing; of tropical storms, floods and sea-level rise as well as soil erosion

Heat regulation on the sand

Annual income from livelihood activities

Years 10+:

Increased natural forest cover

Increased soil mosture

Improve groundwater availability

Effectively reduced impacts from strong winds, sand flowing and soil erosion during tropical storms

Stable income from livelihood activities

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