

II. Promotion of Learning for Mangrove Conservation

1. Introduction

Project No: THA/MFFSGF/12/02

Project Title: Promotion of Learning for Mangrove Conservation

Grantee: Andaman Discoveries

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1.1 Implementing NGO/CBO: Andaman Discoveries: Established as an NGO in 2004 to originally provide immediate relief assistance to the victims. After the critical period, the organization becomes focused on an issue of community livelihood. The work carried out on the issue included English language training, computer use and community leader skill. Currently, the organization still maintains the assistance to the communities through eco-tourism and identification of market for community products for supplementary income, whilst encouraging traditional livelihood.

1.2 Location of project: Mangrove area of about 2,500 ha at Baan Thungrak Village in Phang Nga Province's Kuraburi District – an area with mangrove around the banks of several canal connecting to Kuraburi Estuary and mangrove along the coast of Kuraburi Bay. With the Mae Nang Khao Mountain Range on one side and a forest reserve on the other, the location is found with 32 mangrove species. Half of the area is cultivated land with the other half a favorable ground for fishery. Due to unregulated use of natural resources, the ecosystem of the location is degrading at an alarming rate.

1.3 Target Population: 50 out of 463 households in project location who earn living through agricultural practice (mostly oil palm and para-rubber) as well as fishery. Fishery during rainy season for those members who practice agriculture (about 50 %) is for supplementary income, while the other 50 % depends upon fishery for consumption and sales to generate income. The per capita income is THB 60,000.

1.4 Long-term objectives to support national coastal resources policy:

- 1) Improving knowledge base for coastal planning, policy and management (POW 1)
- 2) Building the capacity of professional coastal managers for integrated coastal management (POW 7)
- 3) Improving community resilience to natural disasters (POW 9)

1.5 Specific Objectives:

- 1) To build capacity of youth groups on significant values of mangrove and related ecosystems which directly and indirectly generate community livelihood benefit
- 2) To put into practical use the capacity such as for local tourism and community-based research

1.6 Major stakeholders

- 1) Mangrove Development Station 17
- 2) Chevron CO., Ltd.
- 3) IUCN Thailand
- 4) Petroleum Authority of Thailand
- 5) Thailand Environment Institute

2. Project Completion

2.1 Period of Participatory Evaluation: August 2013

2.2 Number of Beneficiaries/ Participating personnel: 463 households

Women:	520	persons
Men:	527	persons
Children:	120	persons

2.3 Income and Expense

Detail		Amount (THB)
Budget Allocation		300,000
Total expenditure		303,582
% expenditure against allocation		101%
Co-financing Sources		In-kind (THB)
IUCN		5,000
Mae Nang Khao Conservation Network		3,000
Thung Nang Dam Conservation Group		3,000
Hard Praphas Tourist Group		3,000
Koh Ra Botanical Garden Phangnga		3,000
Upper Andaman Coastal Youth Group		500
Community-Based Tourist Institute		10,000
Baan Thung Rak Chaiphath School		6,400
Grantparent Group		6,000
Greenfins Association		5,000
Total		44,900

2.4 Activities and results/outcomes

Main Activities Implemented	Results/Outcomes
1. Building capacity of youth group (students) to learn mangrove conservation based on Reef-to-Ridge approach, namely; data collection, survey, site study, nature trail, exhibition on mountainous forest to mangroves ecosystems 2. Enhancing the capacity of youth group through the primary research method to monitor changes of mangrove ecosystem 3. Building a site study and demonstration plot of artificial fish habitat (Baan Pla) 4. Building young tour guides for sharing knowledge on mangroves conservation and coastal ecosystem services	1. Increased capacity of 29 members of youth group witnessed by ability to conduct survey and record resources inventory to be used in primary analysis, and to present the data & information 2. Compiled data & information on change as results of artificial habitat. 3. Established exhibition room in Baan Thung Rak Chaiphath School with data & information on mangrove and other living species 4. Established nature study trail soliciting 200 visitors/year at an estimate

2.5 Plans and Activities for Sustainability:

- 1) The project would keep on collecting data on result changes of the artificial reefs. Community would be further requested to cooperate in conservation of this location. Additional financial resources would be sought to expand areas for laying down additional artificial reefs.
- 2) The project would keep on maintaining the established nature study trail.
- 3) The project would keep on building capacity of youth group by study tour to share experience with surrounding communities.

2.6 Challenges and constraints

- 1) Weather condition (monsoon season) delayed several project activities.
- 2) As children did not recognize much about threats in their environment, building awareness was of utmost important.
- 3) Project duration is too short for effective evaluation process on awareness and capacity.

2.7 Lessons Learned

- 1) Working with youth should be as continuous as possible.
- 2) Protection notification by words of mouth was not so effective as publicized material such as posters
- 3) Fish habitat would be replicated in other communities, especially, TEI had requested pictures as an example for possible replication.

3. Story of change

3.1 Change in people or human knowledge, attitude, and practice (behavior)

Artificial fish habitats resulted in increasing quantity of fishes, which could be interpreted as direct benefit. Indirect benefit from this activity could be evinced by increased awareness and more active participation in conservation of their coastal/marine resources.

3.2 Change in socio-economic status or livelihood

In monsoon season, conserved mangrove area in canals was a better fishing area for community livelihood, where the catch was sufficient. In addition, the artificial reefs seemed to make community fishing easier.

3.3 Change in participation and social interaction

The youth acquired sufficient knowledge to care and take action to protect their natural resources, from reef-to-ridge - their valued treasure.

3.4 Change in coastal governance frameworks

The community started thinking to set up a management plan and community regulation on fishing and use of coastal/marine resources in a more sustainable approach.

3.5 Change in natural environment or ecosystems, and practices in ecosystem/coastal conservation

Amount of aquatic animals, i.e. fishes, crabs in conservation zones are explicitly increased because of artificial fish habitats and community conservation effort.

4. Monitoring visit by the National Coordinator, NSC and NCB members

4.1 Findings and observation

In order to be briefed on undertaken activities and evinced results, the visiting team and 3 project leaders interacted at the Community Learning Centre on Mangrove Management, in Baan Thung Rak. In addition to updating verbally the progress made, the team was specifically shown on computer underwater activities regarding laying down 90 artificial reefs which was completed during October 2012 in three locations, with 30 reefs in each. Records of catches in the location were being kept to reflect changes.

Favourable results produced by the 95-ha juvenile sanctuary of the project was related. The 95-ha sanctuary had been generating a variety of aqua species. One of these was mangrove crabs that produced ovum - event communities were not familiar with. During August 2012, about 600 kg. of crabs were harvested. It was also related that an endangered species, "Dok Fard" (*Lumnitzera littorea*) was seen thriving in the community mangrove of about 240 ha, just across the canal , next to the sanctuary.

As to a change that would result from the artificial reefs laid, a survey & monitor were conducted during January 2013 and conclude that It was too soon to assess a change in number of aqua species. However, after two years of mangrove and habitat management under the previous project and continued effort of this current one, the general trends were fairly promising. Livelihood activities on fishery seemed to be easier.

In term of improving knowledge base for coastal planning, policy and management, the project had accomplished to a certain degree. Project members seemed to gradually learn from project activities. In order to add more to the knowledge base, the projects had been working closely with the Botanic Garden of Koh Ra and Mangrove Development Station 17 in Khuraburi District, Phangnga Province.

4.2 Photos



The Community Learning Centre on Mangrove Management of the project serves as an office, learning place on some relevant data & information on marine and coastal area , and a meeting place. Average persons would be able to learn in general about marine and coastal ecosystems. In the photo, the visiting team is being briefed about project activities – laying down artificial reefs.



Around the learning centre is the 95-ha juvenile sanctuary. After two years of community approaches, a lot of data & information are being generated from this. The 240-ha community mangrove next to the sanctuary was said to be in good condition, with some endangered species seen thriving.



And about 50 artificial reefs of this sized were produced through community experience and modification.



Interacting with youth group of the project in Baan Thungrak School, the group discusses how to demonstrate, to the visiting team, their findings and conservation awareness after undergoing a training process.



This fisherman was not able to confirm a favourable result either, but stipulated that fishery required less effort than before. This bag contains species of about 10 kg. he caught on this day.