

AWF Aceh Project # 1

Country:	Indonesia
Project Title:	Pilot project for rehabilitation of small-holder tambaks for income and livelihood in three villages in Pidie District, Aceh province, Indonesia.
Project Number:	
Funding Required:	S\$28,812 [US\$10,000 was made available by NACA and US\$18,812 from YSI through WAS-AwF]

I. Project rationale

1.1 Background

Aquaculture is an important activity for many small-scale farmers in the coastal communities of Aceh. Before the tsunami of the 26th December 2004, the farming of fish and shrimp in ponds in coastal ponds (locally known as tambaks) produced around 10,000 tonnes of shrimp and 6,000 tonnes of fish from over 45,000 ha of ponds. Preliminary assessments conducted in early 2005 indicate that over 50,000 people depended directly for employment on the aquaculture sector.

The FAO assessment of the impacts of the tsunami on the aquaculture sector show the tsunami has severely damaged or destroyed over 10,000ha of tambak ponds, caused lower levels of damage to 25,000 ha of tambak ponds and disrupted over 600 km of water supply canals. The impacts on livelihoods of small-scale tambak farmers have been significant, and most farmers are now facing considerable difficulties in restarting their livelihoods. These assessments suggest most urgent priorities for restoring tambaks for small-scale aquaculture are in the north-eastern coastal districts of Pidie, Bireuen and Aceh Utara. Thousands of small-scale tambak farmers in these coastal districts need assistance to restart their livelihoods.

1.2 Problem statement and rationale

Consultation with small-scale tambak farmers in Pidie, Bireuen and Aceh Utara, reveal that tambak farmers have several difficulties in starting fish and shrimp production, due to lack of access to water (from degraded water supply and drainage systems), and lack of financial assets to rehabilitate ponds and purchase the necessary inputs (seed, fertiliser) to restart fish and shrimp production. Tambak farmers in these districts give priority to restoring water supplies to tambaks by removing the silt and sediment clogging water supply canals. Furthermore, farmers in many villages in these three districts have little

other work activities and a cash for work program to clean up debris and silt from suitable tertiary and secondary water supply canals will provide tambak farmers and their communities with opportunities to earn cash and take the first steps in restoring tambak farming and their primary source of livelihood.

The project aims to support a pilot activity in tambak water supply rehabilitation in three priority villages to clean up tertiary water irrigation systems to small-scale farmer tambaks in Semalanga sub-district of Pidie district. This pilot project has been prepared in consultation with tambak farmers in the three villages, the sub-district tambak farmer association, Pidie Fisheries Office and the local technical-supporting agency (Ujung Batee Regional Brackishwater Aquaculture Development Centre) staff. The purpose of this pilot activity is (1) to support farmers restore tambak water supplies in three villages; and (2) through monitoring and supervision to learn from the experience and apply the lesson's learned to the development of future cash for work programs, including that to be supported under other planned FAO recovery projects (eg ECHO).

The project will be organized through and technically supervised by the Ujung Batee Regional Brackishwater Aquaculture Development Centre of the Ministry of Marine Affairs and Fisheries (MMAF). The centre has a government designated responsibility to support rehabilitation of the aquaculture sector in Aceh, and will itself be rehabilitated by FAO and the Government of Italy. The technical staff of the centre have a responsibility and experience in rehabilitation of tambak farming areas in Aceh.

2. Objectives and outputs

The pilot project has immediate objectives and expected outputs as follows:

Objectives	Outputs
1. Support farmers to clean up tertiary canals and restore water supply to 392 ha of tambaks for 426 farming households in three villages (Jemerang, Pasi Lhok, Lancang) in Pidie district through a cash for work program.	1.1 Farmer teams mobilised for clean up in 3 villages 1.2 Tertiary canals cleaned of debris and silt and water successfully restored 1.3 Plan prepared by farmers to restart traditional tambak farming
2. Develop guidelines on organising cash for work programs for tambak restoration.	2.1 Monitoring and evaluation of pilot project. 2.2 Guidelines for tambak restoration prepared.

The pilot project is the first step in restoring small-scale, traditional, aquaculture in these three villages, providing a learning experience for all concerned for subsequent expansion of activities in other villages and sub-districts in Pidie. The site has been chosen by Ujung Batee staff, district Fishery Service staff and the FAO Aquaculture team because of the following reasons:

- (1) ***Tambaks are socially important.*** Traditional tambak aquaculture (of milkfish and shrimp) is an important source of income to households in the three villages, with a high proportion of small-holders with farm holdings less than 1ha
- (2) ***Restoring the tertiary canal will make a difference to small-holders.*** Restoring the public water supply through tertiary canals in these three villages will provide a much-needed water supply to the tambaks, presently closed due to siltation.
- (3) ***Learning experience.*** The three villages chosen will provide valuable learning experience involving small-holders.
- (4) ***Participatory development.*** The pilot project was developed by the farmers and village authorities and is based on the expressed needs of the community.

3. Organisation of the pilot project

The pilot project is divided into two parts as follows

3.1 A cash for work contract

A cash for work contract will be provided to the Ujung Batee Regional Brackishwater Aquaculture Development Centre of the Ministry of Marine Affairs and Fisheries (MMAF). The contract will cover the following items:

1. Cash for daily work of farmers/villagers. The workers will be selected by the tambak farmers association chief of the sub-district (who is village chief of Pasi Lhok). The village chief will organise work schedules to share the work among villagers who want to work (including tambak farmers, labourers and others who need work in the village).
2. Tools (lham, baskets, bags for putting sand from the canals, strong string)
3. Two water gates (for each village) public canals (to be managed – as before – by the local tambak farmer association)

(1) Cash for work

The following are the estimates of work required prepared in consultation with farmers:

Village	Length of canal to be cleaned (m)	Volume of silt to be removed	Number of person-days required	Estimated time required for completion	Cost (Rp35,000/day)
Lancang	2500	5000 m ³	2222	45 days	77,770,000
Pasi Lhok	3195	6390 m ³	2840	45 days	99,400,000
Jeumeurang	1250	2500 m ³	1111	45 days	38,885,000
Total			6173		216,055,000

The estimates are made on the basis of the following assumptions:

- One worker will remove 2.2 m³ of sediment/day.
- 1 m length of canal = 2m³ (2.5 width at top, 1.5m at bottom, x 1.0m depth).

- Maximum of 137 people per day, working over a period of 45 days

(2) Tools and water gates

The estimates of tools and materials (for water gates) required are as follows:

Tools	Number	Unit cost	Cost
Lham	137	30000	4,110,000
Pengki	60	8000	480,000
Bags	6000	1000	6,000,000
Hoe	60	37000	2,220,000
Wheel cart	15	175000	2,625,000
Sub-total			15,435,000
Water gate	6	1,500,000	9,000,000
Small bridge	3		6,000,000
Sub-total			15,000,000
Total			30,435,000

(3) Organisation of the cash for work

The cash for work contract will be organised as agreed with District Fisheries Office, village head and farmer association chair, and Ujung Batee Centre, under the overall management of the Ujung Batee Regional Brackishwater Aquaculture Development Centre of the Ministry of Marine Affairs and Fisheries (MMAF) as follows:

1. Coordinator – one staff from Ujung Batee will be assigned for full time coordination (in the field) of the pilot project. She/he will be paid Rp150,000/day.
2. Supervisor – one district staff from the District Fisheries Office will be assigned for full time coordination (in the field) of the pilot project. She/he will be paid Rp 90,000/day, plus fuel (estimated as Rp 5,000/day).
3. Chairperson – the Chair of the BMPT (tambak farmer organisation) or person nominated by the supervisor and Chair will be responsible for organisation of the cash for work program in each village level, selecting workers with the supervisor, keeping a daily record of the names of people working, and disbursing cash to villagers each Friday. Three Chairpersons will be appointed, one for each village. She/he will be paid Rp 40,000/day.
4. 30-50 persons will work/day under the Chairman, depending on daily availability of labour and other daily commitments of farmers.

Costs estimates

Person	Number of person-days	Costs/per day	Units	Total cost (Rps)
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	required			
Coordinator	1	150,000	45	6750000
Supervisors	1	95,000	45	4275000
Chairpersons	3	40,000	45	1800000
Labor	6173	35,000		216055000
Sub-total				228,880,000
Water gate			6	15,000,000
Small bridges			3	6,000,000
Tools				15,435,000
Sub-total				30,435,000
Total (Rp)				259,315,000
Total (US\$)				28,812.7

The contract for restoration of the water supply in tertiary tambaks will be with Ujung Batee Regional Brackishwater Aquaculture Development Centre. The centre will have the following responsibilities:

1. Technical and organisational supervision of the program
2. Disbursement of the cash through the Chairman of each work group, following UNDP guidelines on cash for work programs.
3. Monitoring and evaluation of the cash for work pilot project according to agreed plan.
4. Organising with the District Fisheries Office a final review workshop involving farmers from the three villages to review outcomes of the cash work lesson's from the pilot, and develop an aquaculture action plan for follow up work to ensure full recovery of the brackishwater ponds, with an emphasis on small-scale farmers and labourers.
5. Reporting on the cash for work pilot, and with FAO backstopping staff, for drawing out lessons and preparing guidelines on tambak rehabilitation cash for work projects for wider application elsewhere.

3.2 Monitoring and evaluation

The Ujung Batee staff will report on the progress, and the final outcome from the project to the Directorate General of Aquaculture, who will report to WAS and AWF.