

## Cash for Work, Aceh

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*Photos by Hasanuddin Hasan, Ujung Batee Regional Brackishwater Aquaculture Development Centre.*

Aquaculture is an important activity for many small-scale farmers in the coastal communities of Aceh, Indonesia. Before the tsunami of the 26th December 2004, around 10,000 tonnes of shrimp and 6,000 tonnes of fish were produced per year from some 47,000 ha of coastal ponds, known locally as tambaks. Preliminary assessments conducted in early 2005 indicated that as many as 90,000 people in Aceh may directly depend on the aquaculture sector for their employment.

The Food and Agriculture Organization of the United Nations (FAO) assessment of the impacts of the tsunami on the aquaculture sector in Aceh found that over 20,000 ha of tambaks had been severely damaged or destroyed with lower levels of damage to at least an additional 5,000 ha, and disruption to more than 800 km of water supply canals. The impact on the livelihoods of small-scale farmers has been significant, and most now face considerable difficulties in restarting farming activities, which are their main source of income. The assessments indicate that the most urgent priorities for restoring tambaks for small-scale aquaculture are in the north-eastern coastal districts of Pidie, Bireuen and Aceh Utara.

Consultation with small-scale farmers in these districts revealed that they had difficulties in starting fish and shrimp production due to a lack of access to water, as a result of damage to water supply canals and drainage systems, and a lack of financial assets to repair ponds and to purchase the necessary inputs such as seed and fertiliser. Farmers in these districts have few other work options available and consider restoration of water supplies to tambaks a priority, requiring removal of sediment clogging canals. A “cash for work” program was seen as a practical way to clean up debris and silt from suitable secondary and tertiary water supply canals while providing farmers and their communities with opportunities to earn income, and take the first steps in restoring their farms and primary source of livelihood. NACA, the World Aquaculture Society and Aquaculture Without Frontiers therefore designed and implemented a pilot project in the villages of Pasi Lhok and Jemerang, in the Pidie District to:

- i) Support farmers to restore the tambak water supply; and
- ii) Learn from the experience in order to apply the lessons to the development of future cash for work programs in other villages.

The project was developed in direct consultation with the farmers, the subdistrict Tambak Farmer Association and the Pidie Fisheries Office. It was organized through and technically supervised by the Ujung Batee Regional Brackishwater Aquaculture Development Centre (Ministry of Marine Affairs and Fisheries). The project was the first step in restoring small-scale traditional aquaculture in these villages, providing a learning experience for all concerned.

Initially, a cash for work contract was provided to the Ujung Batee Centre. The contract covered the following items:

- i) Cash to pay for daily work of farmers/villagers. The workers were selected by the Tambak Farmers Association Chief of the sub-district. The village Chief organised the work schedules to share the work among villagers who wanted to work (including farmers, labourers and other people in need of income).
- ii) Purchase of manual digging tools, sandbags and water gates.
- iii) A provision that public canals and water gates are to be managed—as before—by the local Tambak Farmer Association.

### **Clearing canals is tough work**

The length of canal to be cleared in the villages of Pasi Lhok and Jemerang was initially estimated at around 1,250m and 3,195m respectively; and the volume of silt to be removed—by hand tools alone—in the order of 2500m<sup>3</sup> and 6390m<sup>3</sup>. It was estimated that clearance of each canal would take about 45 days with 50–60 labourers in Pasi Lhok and 25–30 labourers in Jemerang.

By early June 85 farmers in both villages had been working for approximately three weeks, for a total of 1,530 worker-days. During this period they cleared approximately 2,500m of canal, 78% of the original objective, and removed about 1,650m<sup>3</sup> of silt. However, there are still three sections of canal that need repair, a total of about 60m, which need supporting barriers made from bamboo (to be held in position with stakes). These sections lie on sandy soil, which does not permit freestanding dykes, so some infill with more cohesive soil will also be necessary. Due to changes in the landscape an additional large water gate has been proposed for Pasi Lhok in conjunction with the two small water gates.

### **A learning experience**

The cash for work program has achieved its goals of providing villagers with income while they worked to rehabilitate their means of livelihood. However, the programme has had to contend with some unforeseen issues. Listed below are some issues to be aware of before planning and starting a cash for work programme. We hope that our experience will help others.

#### **Finance**

- Some unforeseen circumstances are bound to arise, so it is important to include some provision in the budget to cover uncertainties in the work. In Aceh, these have included rain, abnormally high tides and additional equipment requirements such as water gates and pumps.
- Paying a daily rate may not make most efficient use of funds where work is likely to be continually disrupted by high tides or weather. A solution may be to pay upon a daily standard of work to be completed (i.e. the notion of a start-stop-finish).
- There is also the problem that additional staff may need to be seconded to perform the tasks of the supervisor, as the officers with the experience to carry out this work are likely to be busy and unable to operate on a daily basis in the

field. This may increase the cost of supervision, highlighting the necessity of covering for uncertainties.

- If the budget gets tight towards the end of the project and there are additional work requirements not accounted for in the original proposal, it can be difficult to choose who works and who doesn't.

#### Construction

- Sandy soils can add to construction costs, for example, we had to construct additional barriers to support dykes in affected areas of the canals, which required more than excavation alone.
- There may be additional needs to replant mangroves to control erosion, or even to build additional structures for mangrove replanting. It is important to obtain farmer support for these activities, particularly if replanting will encroach on pond area.
- Water gates should reduce the incidence of erosion within the canals and this may be figured into the budget. This may only become evident once the canals are operational again, whereas it may not have been necessary prior to the tsunami, nor evident before progressing with the work.
- Tidal profiles have changed since the tsunami, possibly due to erosion and sediment deposition across different areas. Normally the months of March to September would have relatively small tidal variation, however, the tidal variation currently being observed is indicative of the larger October to February tides. This has delayed clearance of canals and rebuilding of dikes as work can only be done during low tide.
- Monitoring is essential to ensure that quality is maintained and standard depths are met.

#### Employment and social issues

- Young men can place a lot of pressure on coordinators to give them work. However, placing them into working groups by themselves was found to be an effective way to confine any aggression towards those organising working parties, which generally subsided after a few days of labour.
- Although the labourers were mostly men, the tambak cash for work also provided opportunities for employment of women. The design of the cash for work needs therefore to take an equitable and gender sensitive approach.
- Our experience has been that it can be difficult to maintain a reasonable quality of work due to the diversity of workers employed. However, if the primary objective is to give the people immediate financial support, then physical ability should not be a consideration. It is more important that each person feels that they have an equal chance of employment, or the selection process will create tension. On a daily basis most targets were not reached but with adequate supervision and a monitoring program in place, it should be possible to maintain an acceptable standard of quality and progress.
- Controlling worker numbers can be difficult—some days the required number may not arrive, and this needs to be carefully coordinated.
- Local governing authorities (eg Dinas Perikanan), farmer groups and the head of the village must be brought into the program as they play a critical role in coordination, mobilising local people and resources and in maintaining good relations with the villagers.