

Opportunities in sustainable coastal aquaculture **for the very poor**

Simple, low-cost methods for adding value to sea foods help the coastal poor enter local markets. The lives of many poor people in coastal areas who traditionally depended on fishing and foraging are seriously threatened. Now, even those with very modest assets and skills can produce less familiar but high-value sea foods for both local and export markets.

The very poor in coastal areas in Bangladesh, Vietnam and the Philippines are already seeing quick returns on their investments using these methods. Such ventures have great potential for improving livelihoods in almost all Asian coastal regions.

Low start up and running costs

Simple individual cells, cages and structures for rearing fish, crabs and molluscs can be put in open water. Made of locally available bamboo, they are affordable and biodegradable. Feed is also cheap and locally available. Given a helping hand by development workers, government extension staff, and even local entrepreneurs, villagers quickly learn to produce high-value sea foods—mud crab, sea weed, molluscs, tilapia, seabass, milkfish and lobsters. Even those who have survived by collecting along the shore can become producers. They just need to be shown these simple techniques.

Adding value to sea food

Poor producers—including some extremely poor—in the Khulna and Cox's Bazar districts in Bangladesh have learned to culture sea foods that are highly marketable.





Photo: S. Mamm

Solar drying to reduce rancidity is another simple, low-cost way that can add value in drying fish. By getting together in cooperatives, these small producers can penetrate market chains, and strengthen their bargaining power in buying inputs and marketing.

Turning low-value soft-shell crabs into high-value hard-shell crabs In Bangladesh, non-government organisations—together with crab collectors, small farmers and poor fish driers, and the technical people—found that producers could fatten low-value soft-shell crabs into high-value hard-shell crabs in just two weeks. This means that a mud crab collector fattening 60 crabs could get a net return of Tk1,500 in just 12 to 14 days.

Producing high-quality sea foods Over 500 households in Chittagong and Khulna learned to dry fish to high standards, and produce high quality molluscs and seaweed. So much so that wholesalers and non-government organisations, seeing the potential supplies of these high-quality products, are planning to arrange micro-credit so that collectors can start value-adding ventures.

The idea catches on

Poor tribal women who previously depended on collecting shrimp larvae quickly latched on to these techniques because they promise a quick return. Many non-government organisations in Khulna and Cox's Bazar are also enthusiastically promoting these methods through demonstrations and training courses for the poor. Plus, requests for information on building cages are streaming in. The university is also sponsoring seminars and workshops for researchers, non-government organisations, planners and policy makers.

The poor in other Asian countries are also taking up these methods, for example in coastal areas of Nha Trang and Can Tho Provinces, Vietnam, and in Luzon State, in the Philippines.

Ensuring sustainability

Preventing any possible negative effects on the environment is important. So, fishing communities in Khulna, Bangladesh, and Can Giao and Do Son, Vietnam, helped work out the carrying capacity of fish cages and aquaculture ponds based on simple nutrient budgets. Practical indicators were developed, tested on local ponds and set out as handy guidelines. This means that small-scale producers have the information they need to make good use of water and manage ponds productively.

Rosy prospects

Where the enabling conditions are sympathetic, the prospects are rosy. In Bangladesh, production of mud crab is booming. The government's export policy is favourable. Exporters face no bureaucratic obstacles in exporting live crab or dried fish. Plus, collectors have no difficulties in getting licences.

For more information

For further technical information go to the RIU online database at www.researchintouse.com/database and type in **AFGP10** or email riuinto@nrint.co.uk

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