

Ecological Economics

A new field of study has emerged in the last decade which can provide important theories, tools and methods for research on marine and coastal resources and aquaculture. Ecological economics is a transdisciplinary field of study that addresses the relationships between ecosystems and economic systems in the broadest sense. It takes a holistic systems approach that goes beyond the normal narrow boundaries of academic disciplines. It does this by focusing on the sustainability problems facing humanity and the life-supporting environment on which we depend. It is argued that humans have a special place in the system because we are responsible for understanding our own role in the larger system and managing it for sustainability. Ecological economics views the socioeconomic system as a part of the overall ecosphere, emphasizing carrying capacity and scale issues in relation to the growth of the human population and its activities, and the development of fair systems of property rights and wealth distribution.

The ecological economic perspective emphasizes that the economic system is an open dynamic subsystem of the overall finite global ecosphere. The two are physically interconnected by the flows of

energy, natural resources and environmental services from the life-supporting environment. The ecological economics view treats humans as a part of and not apart from the processes and functions of nature.

The field of ecological economics has opened up a range of critical issues that require academic research. Some important research issues include natural resource valuation, income and asset accounting, ecological economic modeling, and institutions for sustainable governance. Unlike traditional academic research, however, this research emphasizes the linkages between science and policy and the relevance of research results for actually achieving sustainability.

Many of our AFSSRN members have already been involved in ecological economics research. We have conducted a regional training on natural resource valuation. The fisheries co-management research emphasizes institutional reform and property rights. Ecological economics topics are being integrated into teaching programs throughout the region. This is an important area of research in which AFSSRN members will increasingly participate. *R.S. Pomeroy*

Safety Net or Debt Trap?

Ties Between Marketing and Credit in Coastal Bangladesh

M.E. BLOWFIELD and NASIMUL HAQUE

The article is based on fieldwork carried out between May 1993 and June 1994 in three coastal fishing communities in Bangladesh. The work was part of the UK Overseas Development Administration's Bay of Bengal Post-Harvest Fisheries Project which is managed by the Natural Resources Institute.

The Net

Fishing is a risky business, and nowhere more so than in the seas off Bangladesh. Cyclones and tidal surges can cause years of investment in boats and gears to be washed away overnight. High winds or rain can mean days or weeks when those with small crafts are unable to go to sea.

Even without the protection of bad weather, the Bay of Bengal is often reluctant to share her riches. For months, the catch accessible to small craft is miserly, and by cruel twist of fate, the peak season for high value *hilsa* coincides with the monsoon season, meaning that fishers often have to stay ashore while the catch rots in their nets.

Uncertainty means that coastal fishing communities veer between boom and bust. During the *hilsa* season from June until September, the communities are crowded with buyers, boat repairers, salespersons and tinkers. When the season ends, the money stops and the strangers go away. Many of the communities turn to push nets or set bagnets, and household incomes are less than five per cent of what they are during the *hilsa* season.

But although the fish buyers do not visit the communities during the lean season, their presence is still felt. When a household needs credit at the local shop or money to repair equipment, somebody will contact the buyer or his representative. Buyers do not simply purchase fish, they are also money-lenders, the most available source of credit that many coastal fishing communities have.

The buyers cum lenders are known as *dadondar* and are often members of neighboring farming communities. Their dual role distinguishes them from other fish traders (*paikar*) who do not offer loans. The *dadondar* are in turn linked to *aratdar*, large-scale traders who sell the *hilsa* to the major urban and export markets and who also have access to the large amounts of capital that the *dadondar* demands.

Of course, all this comes at a price and *dadondar* loans charge high levels of interest. But for fishers without access to banks and largely ignored by poverty-focused finance initiatives such as those of the Gramin Bank, the *dadondar* at least fill a real need, and earlier studies such as that of Bennet (1991) viewed the system favorably.

The Trap

With a closer look at *aratdar* and *dadondar*, we raise the question whether the system is an engine of the local economy or in fact a brake. We studied three fishing communities on different parts of the coast, and each shared the same marketing-credit system. In Delipara, for instance, a Hindu fishing community near Chittagong, there are five *dadondar* each with four or five agents. The *dadondar* or his agents make loans during the leanest fishing months, either in cash or by facilitating credit at local shops and kiosks. These loans are made to the boat-owners (*bohoddar*) or captains (*majhi*) who are responsible for their repayments.

The *dadondar* system is not therefore as simple as that described in Fig. 1. It traces the economic hierarchy within the communities, providing loans to the wealthier *bohoddar* or *majhi* who in turn provide loans to their crews. Anyone who is not a crew member does not have access to these loans. Boat-owners tend to prefer crew who own their own nets, in itself an indicator of wealth (Fig. 2). And women, who are excluded from fishing, can only obtain loans through their husbands or other male relatives, limiting their access to capital for fish vending and also their control over the amount of money available for domestic purposes.

The *dadondar* sets the rate of interest for these loans at 60-150% per annum depending on the community and on the credit record of the *bohoddar*. As most *bohoddar* are illiterate, the *dadondar* also serves as bookkeeper in the transaction. A condition of the loan is

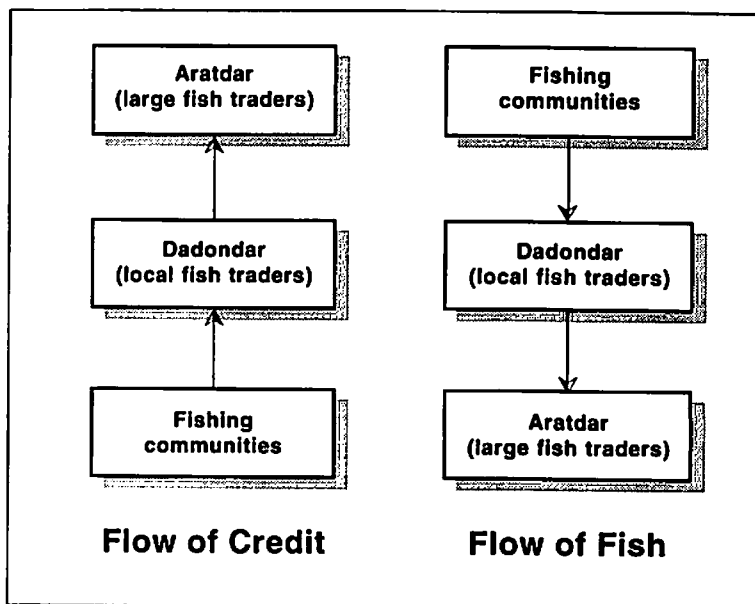


Fig. 1. Theoretical model of flow of fish and credit in Bangladesh coastal fishing communities.

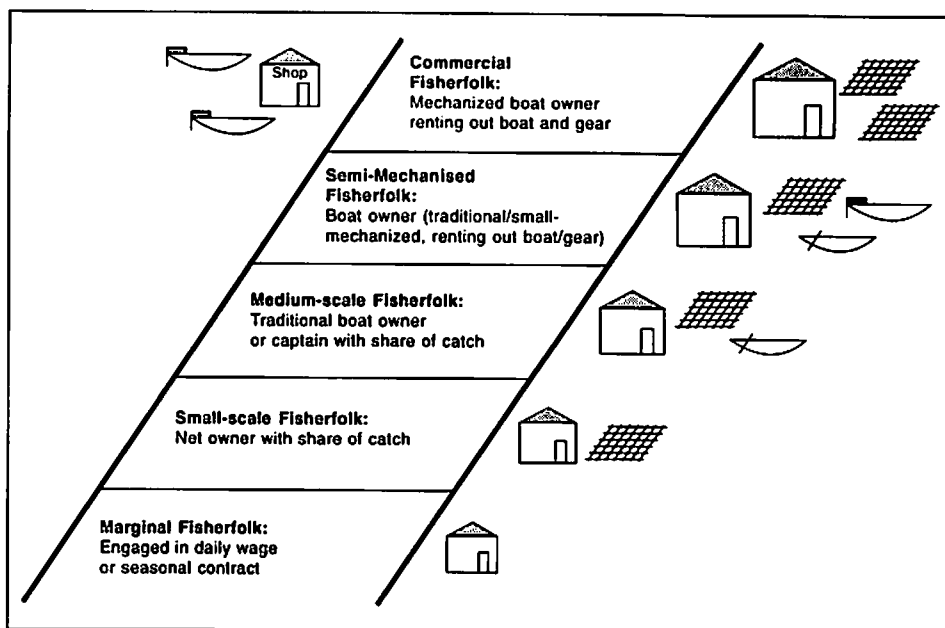


Fig. 2. The ladder of economic progress in coastal fishing communities.

that the *bohoddar* must sell the *hilsa* catch to the *dadondar*, and the *dadondar* sets the buying price at several *taka* less than the price offered by other traders. Furthermore, payment is only made at the end of the *hilsa* season.

But there is a special twist to the *dadondar* system. No matter what the size of the loan is, the *bohoddar* must promise to sell all his catch through the *dadondar* for that season.

Thus, a fisher who requires a loan of Tk1,000 and one requiring a loan of Tk10,000 must both hand over exclusive rights to their entire season's catch to the *dadondar*. If a loan is not repaid in one season, it is carried over to the next season and the *bohoddar* must again surrender the right to sell his fish on the open market.

Table 1 gives an example of how loans are carried on from year to year, taken from the

Table 1. Outstanding loans to *dadondar* amongst Rehanian fisherfolk.

	Number	%
Number of boat captains	14	
Number of crew members	98	
Number of captains with outstanding loans at end of season	13	93
Value of outstanding loans (taka)	226,500	

Data from Rehanian fishing community, 1994

Muslim community in Rehanian on Hatia Island where twelve *dadondar* control over 90% of the *hilsa* trade. In the Buddhist community of Rakhainpara, failure to pay loans has led to one of the community's largest boat-owners going out of business, which in turn has forced his former crew members to leave the village in search of work. But the most severe case is Delipara where years of trying to reduce dependence on *dadondar* loans, including the establishment of community savings and loan groups, ended with the 1991 cyclone which destroyed boats and gears and drove the community back to the *dadondar* in order to obtain new capital.

Escape

There is constant tension between fishers and the *dadondar* which has sometimes resulted in violence, destruction of property and in one case, death. Freedom from the *dadondar* system is a commonly voiced desire in the fishing communities, even among wealthier people. But finding a solution is not simple.

The large poverty-focused credit programs which have proved so successful in agricultural communities, have mostly avoided fishing communities. Fishers have a poor reputa-

tion for repaying loans, although the Bay of Bengal Post-Harvest Fisheries Project is working with fisheries-oriented savings and loans schemes in southern India that have repayment rates in excess of 90%—far brighter than clients of commercial banks.

The Coastal Development Centre (CODEC), a Chittagong-based NGO, was one of the first to develop savings and loans groups in fishing communities. These suffered a setback with the 1991 cyclone, but are still operating in thirteen coastal communities. However, they have not succeeded in replacing the *dadondar* system. In part, this is because the savings and loans model, based on the Gramin Bank, encourages regular savings and borrowings, and is unable as yet to respond to the seasonal nature of fishing community borrowing. Most loans are required prior to the *hilsa* season, but the current model is unable as yet to respond to this sudden peak in demand.

CODEC's approach, which is now being copied by another NGO working in Rakhainpara, has however made loans available to a wider section of this fishing community. It has set up women's groups which, as has proved the case with schemes in agricultural communities, have proved more dynamic and effective than men's groups. But while the *dadondar* system remains strong, the major economic

opportunity for women (i.e., trading) remains closed as they can obtain neither fish to market nor the necessary capital to expand their present activities.

The experience of Santhian, an NGO in Tamil Nadu that has been supporting women's savings and loans schemes in fishing communities for over thirteen years, is highly relevant to the future of existing and future schemes in Bangladesh. Santhian accepts that they will never rid the communities of money-lenders: the savings and loans groups simply offer a greater choice. But above all, the groups are not just there to meet economic needs. For Santhian, a savings and loans group is a focal point for community organization, raising awareness of fisherfolk's social and economic position and helping provide them with a higher profile so that they can lobby for policy change. Without such awareness, groups cannot survive the inevitable periods of pressure. And as the example from Bangladesh shows, it is during these periods that the *dadondar* tighten their hold.

Further Reading

Bennet, C.J. 1991. Report on a visit to Bangladesh to study economic aspects of estuarine set bagnet fisheries for the BOBP Fisheries Program. R1776(R). Natural Resources Institute, Chatham.

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AFSSRN NEWS ITEMS

Network Member to Pursue Ph.D. at SFU



Melvin B. Carlos, AFSSRN Research Associate, has been granted an IDRC scholarship to pursue his Ph.D. in Economic Geography at Simon Fraser University in Burnaby, British Columbia, Canada. Melvin finished his master's degree in Agricultural

Resource Economics at the University of the Philippines at Los Baños where he is also a faculty member.

Training at Cantho U.

A group of Network members provide consultancy services for the project "Support to Strengthening the Institutional Capacity for Sustainable Aquaculture Development in the

Southern Part of Vietnam" which is being funded by the Dutch government through the Fish Culture Research Institute based in Hungary. This pool of experts is currently conducting training courses on various social science topics like Natural Resource Economics, Farm Management and Production Economics, and Socioeconomic Analysis at the University of Cantho in Vietnam. This activity forms part of the training and curriculum development component of the project.