

AFSSRN SECTION

Editorial

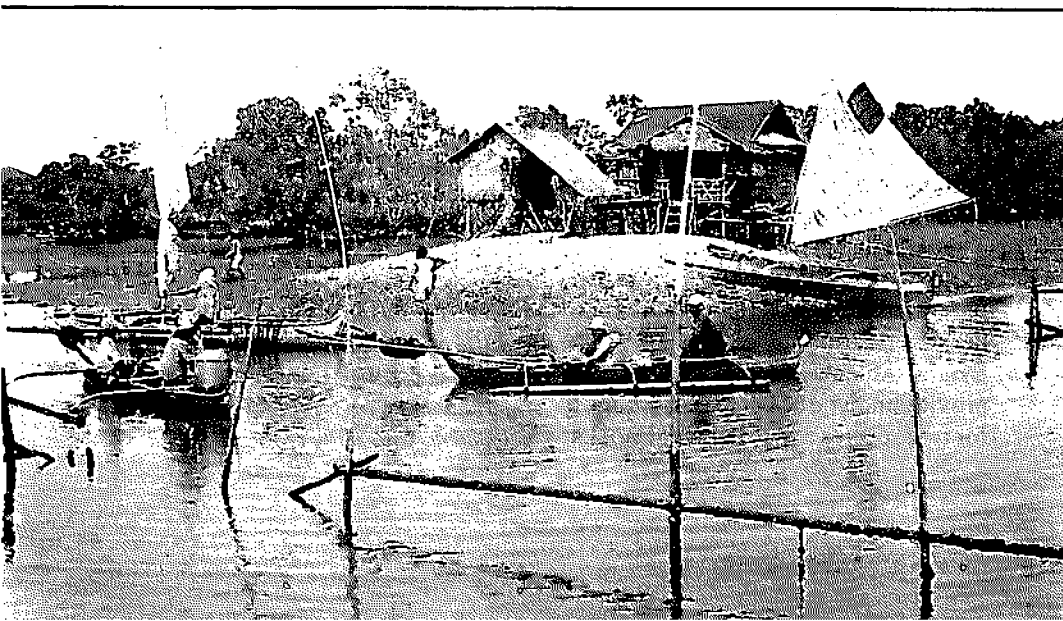
Since its inception almost 10 years ago, the Asian Fisheries Social Science Research Network (AFSSRN) has evolved and expanded its scope of activities. During the first phase of the AFSSRN (1983-1985), there were only three member-institutions and the objective of the Network was to develop individual researcher and institution capability to conduct social science research, although economics was the primary disciplinary focus. The objective was to be achieved through training, information exchange and limited research support. During the second phase of the AFSSRN (1985-1988), five new member-institutions were added. The focus of Network activities was still on training and information exchange, but a much stronger emphasis was put on research projects. Funds were made available to support individual research projects in fisheries management and aquaculture. Phase III activities (1988-1992), with the addition of seven more institutions, were concentrated in three areas: (1) research; (2) training and education; and (3) publications. Continued effort was given to advancing research capabilities with small grants to support projects. More emphasis was given to the introduction and application of research methodologies designed for multidisciplinary research in fisheries and aquaculture. In addition to individual research projects, collaborative research, as a method of capacity building, was conducted. Teams expanded their membership to include a variety of social science and biological disciplines.

Under Phase IV of the AFSSRN, we will evolve once again. Our efforts will become more focused. We will emphasize collaborative research and networking so that member-institutions and individuals can work and learn from each other. Our training will be integrated with our research programs. Four research themes will be followed in Phase IV to provide commonality and coordination of project activities. These are: (1) common property/co-management of coastal fisheries; (2) integrated farming systems; (3) policy analysis; and (4) tools and methods for research and integrated coastal resources management. The research skills already developed will be expanded so that members can conduct policy-relevant research.

When we look back at the history of the AFSSRN, we see a pattern of evolution as the capabilities of our members and institutions have improved. This evolution was from information exchange to training to individual research to collaborative research to policy-relevant research. A group of trained and capable social scientists now exists in Southeast Asia to do capture fisheries, coastal resource and aquaculture research. Phase IV will allow us to continue to expand these capabilities and to assist those institutions which still need further institutional development. This phase will also see an expansion of the geographic scope of the Network into other areas of Asia. Our members will serve a central role in capacity-building of these new institutions and individual scientists. *R.S. Pomeroy*

Oyster and Mussel Farming in Western Visayas, Philippines

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The slipper oyster (*talaba*) and the green mussel (*tahong*) are the only mollusc species farmed in the Philippines. They are farmed for their meat, and consumption is mainly for the domestic market.

The Western Visayas region, situated in central Philippines (Fig. 1), is one of the major sources of oysters and mussels. Natural population of oysters

Fishers engage in oyster farming to supplement their income from fishing. Oyster shells are used to build the land, Sapan Bay, Capiz.

and mussels along rivers and bays and the need to augment income from fishing have led to the proliferation of oyster and mussel farms. Their farming started as early as the 1950s. Today, an estimated 2,000 coastal families engage in mollusc farming in the region.

Oysters are farmed along rivers using the bottom, stake, rack-hanging and raft-hanging methods. In the bottom method, oyster shells or large stones are scattered on the sea bottom for oyster spatfall. In the stake method, whole or halved bamboo poles are used as substrate for oysters. For the rack- and raft-hanging methods, about 10 oyster shells are tied to a plastic strap and hung on bamboo poles. These bamboo poles are tied to a bamboo rack or raft. Oyster farms average 1,300 m². Among the four methods for oyster culture, highest production is obtained from the rack- and raft-hanging methods.

Mussels are farmed in river mouths and bays using the stake and raft-hanging methods. In both methods, bamboo poles are used as substrate materials. The average farm area for mussel culture is 700 m². Higher production is obtained from the stake method.

The cost of capital assets for oyster

and mussel culture is about ₱2,000/farm with owner's equity being the main source of financing. Capital assets include a non-motorized boat, nipa hut on the farm site, tools (e.g., bolo, iron bar for harvesting) and wooden oar.

Production costs incurred by oyster and mussel farmers are for the purchase of substrate materials, hired labor for the construction of racks or rafts and for harvesting, transportation fees, and municipal permits. Higher net profits are obtained from mussel farming than oyster farming (Table 1).

Table 1. Costs and returns of oyster and mussel farms in Western Visayas, Philippines, 1990 (peso/1000 m²).

| Item | Oyster farming | Mussel farming |
|--------------------------|----------------|----------------|
| Returns | | 4,507 |
| 15,154 | | |
| Operating costs: | | |
| Materials | 2,148 | 6,406 |
| Hired labor | 274 | 2,334 |
| Miscellaneous* | 110 | 448 |
| Subtotal | 2,532 | 9,188 |
| Noncash costs: | | |
| Unpaid owner labor | 535 | 514 |
| Unpaid family labor | 392 | 428 |
| Depreciation | 328 | 813 |
| Subtotal | 1,255 | 1,755 |
| Total production costs | 3,787 | 10,943 |
| Operating profit | 1,975 | 5,966 |
| Net profit | 720 | 4,211 |
| Return on investment (%) | 57 | 145 |
| Payback period (year) | 1.7 | 0.4 |

*Miscellaneous costs include municipal permit, boat or raft rental, and transportation expenses.

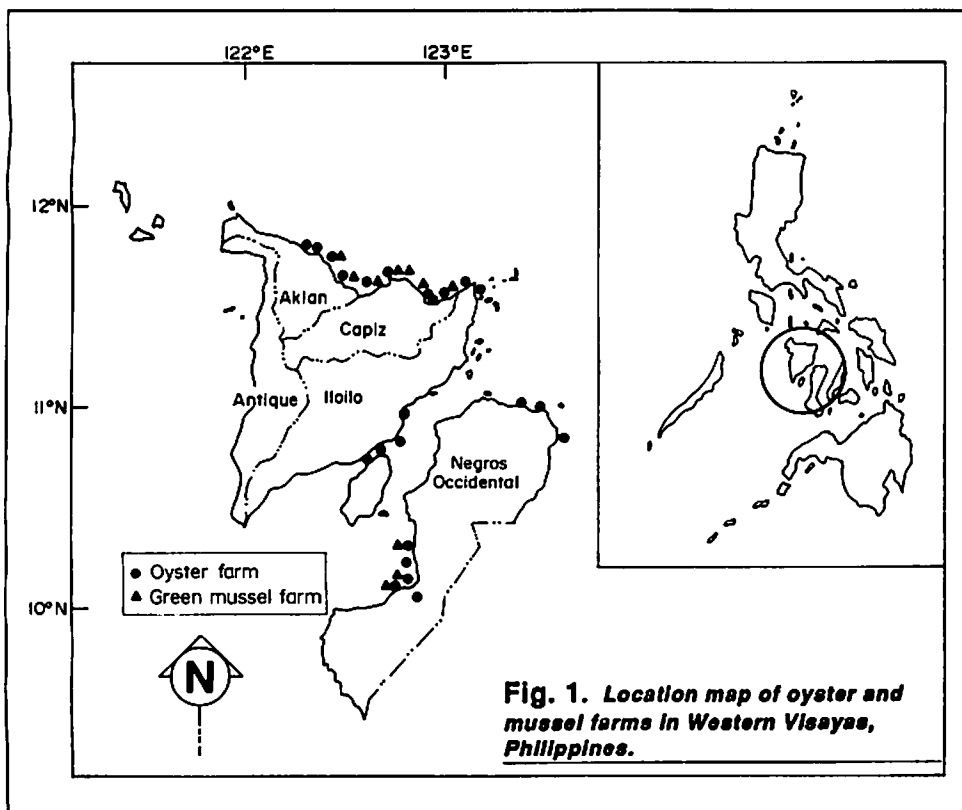


Fig. 1. Location map of oyster and mussel farms in Western Visayas, Philippines.

Oyster and mussel farmers encounter various problems for which they have little or no control. These are poaching (a social problem), environmental, lack of financing, culture and marketing (Fig. 2). For mussel farming, the problems are environmental, culture and marketing (Fig. 3). Environmental problems include mortality of oysters and mussels due to flood, typhoon, fishpond effluents, and siltation or sedimentation caused by run-offs. Absence of spat, space competition by other molluscs, high mortality during dry months, predators and substrate borers, and attachment of hydroids are culture problems that have been reported. Marketing problems include lack of buyers especially during red tide occurrences in Luzon, and low market prices.

Oyster and mussel farming contributes about 20% to the total household income of a small-scale fisher. With the various problems faced by oyster and mussel farmers, research and development efforts should be directed toward strengthening and subsequently maintaining the oyster and mussel industry in the Western Visayas region. The formation of cooperatives of

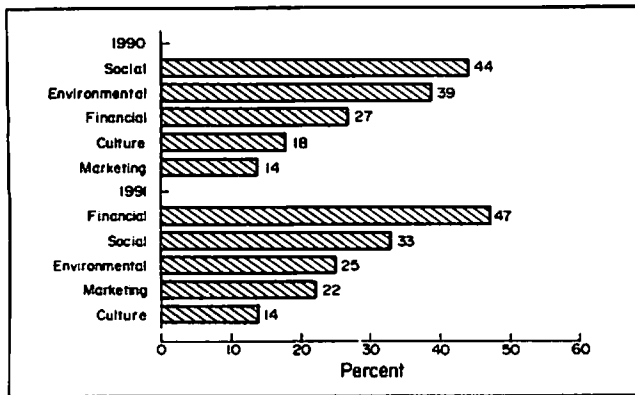


Fig. 2. (left)
Problems of oyster farmers in Western Visayas, Philippines.

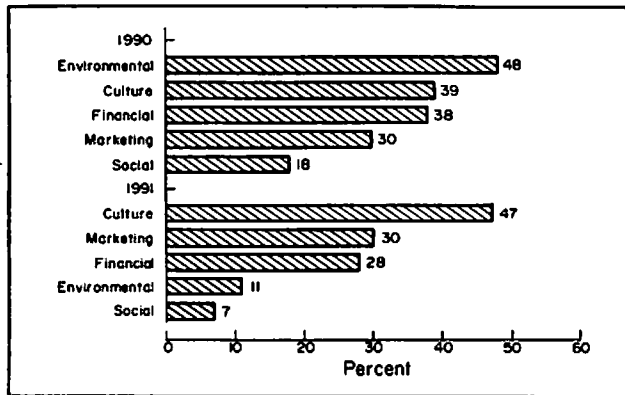
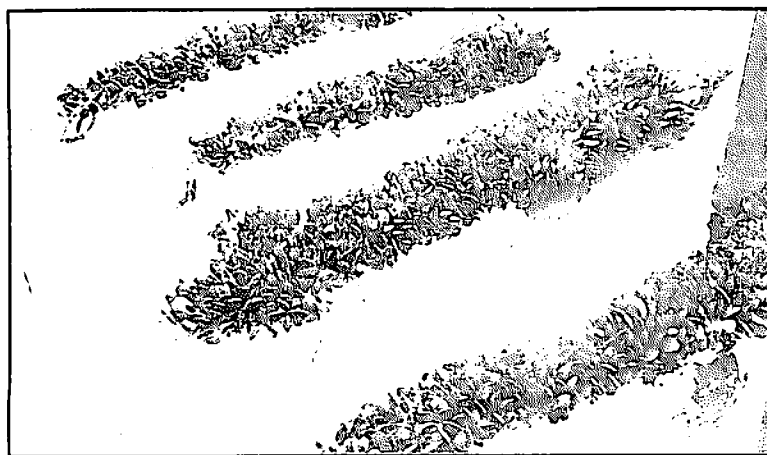


Fig. 3. (right)
Problems of mussel farmers in Western Visayas, Philippines.



Green mussels on bamboo are ready for harvest 10-12 months after spat attachment, Saplan Bay, Capiz.

oyster and mussel growers must be encouraged to enhance bargaining and market capability, application for soft loans, and use of market information and other government assistance. Research should be conducted on the absence of mussel spat, and on the causes and preventive measures of red tide. Finally, government should strictly enforce existing laws and policies, especially the securing of licenses and permits to culture oysters and mussels.

New Directions in the Management and Development of Coastal Fishery and Aquaculture Resource Systems (A Proposal for a Phase IV of the AFSSRN)

After conducting much-needed and relevant applied research on fisheries and aquaculture in its previous three phases, the Asian Fisheries Social Science Research Network (AFSSRN) has identified the following needs to continue into a Phase IV :

1. to translate social science information into policy and management and development programs for sustainable coastal fisheries resources and aquaculture systems; and
2. to continue the professional and institutional development process initiated in the initial phases to address the uneven capabilities and

maturation of member-institutions.

In the first three phases of the AFSSRN, the focus was on developing research analytical capability to collect and provide socioeconomic information on coastal small-scale capture fisheries and inland and coastal aquaculture. During these periods, a growing critical mass of professionals with career interests in fisheries social science was also developed. Network research and associated training have significantly increased the quantity and quality of research skills and the quality of research outputs. However, progress in developing research competence in fisheries and natural resource management and policy has been uneven. While a majority of members have reached

a level of maturity in terms of professional competence and financial assistance to be self-sustaining, continued support is still needed by others to complete the process of professional and institutional development within the region. More importantly, the skills to transfer research results into policy and fisheries resource and aquaculture systems management and development programs have not been developed. If this continues, much of the skills and capabilities developed by Network members will not have the full impact on the fisheries and aquaculture sectors in Asia.

The primary objective of Phase IV is to develop fisheries social science research capacity as a partner with the fisheries, biological and engineering sciences in