honored occupations in Asia and the Pacific and, as they provide the cheapest and most popular protein at most meals, they are also occupations of very considerable national importance. But importance has not resulted in material rewards for the majority of fish-producing households which number amongst the poorest of the region's rural poor.

The persistence of poverty in the small-scale fisheries sectors of most Asian and Pacific countries is a serious social, economic and political problem and the general failure of many fisheries development programs over the past several

Social scientists, particularly economists, have had little professional interest in fisheries and aquaculture in Asia and the Pacific. There are a number of notable studies by anthropologists, sociologists and geographers but very few by economists, whose involvement in the problems of the sector has been mainly on a part-time or ad hoc basis. There are few economists in the region who would classify themselves, either by reason of training or occupation, as fisheries or aquaculture specialists. Consequently, in most countries of the region, no systematic program of economic research on the problems of fisheries and aquaaquaculture and, equally importantly, both have an interest in elevating such research from its present ad hoc status to that of a planned and sustained long-term program which would enable Asian and Pacific social scientists to make regular and constructive contributions to the management and development issues of the sector in their respective countries.

There are three pressing needs that must be addressed if fisheries social science research is to be effective. First, there must be continuity of effort and this implies strong institutional support over the long run. In attempting to meet

The ICLARM Fisheries Social

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decades has frustrated fish producers, fisheries administrators and politicians alike. Boats have been motorized, gears modernized, aquaculture technologies improved and loans and subsidies given out, and still poverty remains for the majority of small-scale producers.

It has become increasingly clear that technological improvements in small-scale capture fisheries without attention being given to other aspects of the sector have led to the overexploitation of the resource. The problem is a complex one requiring a multidisciplinary approach to planning and program design in which resource management becomes a major objective.

Aquaculture is widespread in large areas of Asia and is being developed rapidly in many areas where it is not a traditional activity. It is generally considered that in both old and new aquaculture areas there is high potential for development and this has attracted much government and private investment in various types of fish farming. However, the results have often fallen far short of expectations. Potential yields and incomes are not being realized by the vast majority of fish farmers. There is increasing need for social scientists to join with technologists in seeking explanations for lower yields and incomes and in designing investment and development programs that have greater chances of success.

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culture has been carried out either by government fisheries agencies or in the universities.

Recently, the parallel interests of ICLARM and the International Development Research Centre (IDRC) of Canada came together in a joint decision to set up and fund the Fisheries Social Science Research Network. Both ICLARM and IDRC have histories of encouraging social science research in fisheries and

this need the Network has selected cooperating institutions with care. The institutions are universities which have demonstrated a strong interest in developing a national-level program of primarily economic fisheries and aquaculture social science teaching and research and are willing to contribute substantial staff and other resources to this specialization. The Network will contribute research funds and technical assistance to enable

the staff to develop a long-term research plan.

Second, only high quality research on issues felt to be relevant by fisheries agencies will gain for the program and institution the national recognition necessary to sustain the program in the long run. The Network will assist the cooperating universities in this regard by providing professional training opportunities for the specialist staff, both in research and teaching; professional input into both the teaching and research activities; and opportunities for professional exchanges between the staffs of all cooperating universities through regional workshops and meetings. One such workshop, to discuss the teaching of fisheries and aquaculture economics and course contents and curricula, was held at Universiti Pertanian Malaysia in November 1982.

The third need that the Network must address is for continuous working contact and cooperation between the researchers and fisheries program managers, government administrators and planners concerned with fisheries issues. This will help to ensure that the research and teaching activities of the Network program are geared to national needs and that the research results will feed directly into the national planning processes.

An important component of the Network is to help provide training facilities and opportunities in Asia for the teachers-researchers of the Network's cooperating universities. The aim, of course, is to improve research capacity and, in the longer run, to help each of the universities become the training center for its own nationals. For the foreseeable future, the main training center will be the Universiti Pertanian Malaysia, which now offers an M.Sc. program and a postgraduate non-degree course in fisheries and aquaculture economics (see ICLARM Newsletter, October 1982, p. 19). The UPM program is the first in Asia to offer a specialization in fisheries and aquaculture economics and it is expected to attract students from a wide range of fisheries institutions in Malaysia and the Asia-Pacific region. The UPM teaching program places considerable emphasis on the special conditions and problems of tropical fisheries and aquaculture, and students will be expected to apply their disciplinary skills to a fisheries or aquacultural problem in carrying out their



Right: Dr. Brian Lockwood; middle: Assoc. Prof. Ishak Hj. Omar, UPM; and left: Lecturer Nik Mustapha Raja Abdullah.

thesis research. In the current academic year which will commence early in July, M.Sc. scholars from Bangladesh, Indonesia, Malaysia, the Philippines and Thailand have enrolled in the program. Four are sponsored by the ICLARM Network and funded by an IDRC grant to ICLARM.

For some years to come the training component of the Network activities will be crucial to the overall objective of building research capacity. There exists no stock of trained fisheries or aquaculture economists at present and it is necessary, therefore, to train those who will lead the research teams and set up teaching programs in their own universities. The Network's funds are limited at present and additional sources are being sought. The Network has benefited from IDRC support for the four current Fellows and IDRC is expected to continue this support for a second group of Fellows in 1984. Moreover, the Network is a developing program that will need training assistance for many years to come.

The Network is already funding research projects in three cooperating universities. The fisheries economics group at Universiti Pertanian Malaysia is leading a major study of the Fish Marketing System in Peninsular Malaysia. The proposal for this study was developed in close association with the Malaysian Fisheries Development Authority (LKIM or MAJUIKAN) and the Malaysian Department of Fisheries; the study is being conducted in cooperation with researchers from Universiti Malaya and Universiti Kebangsaan Malaysia. In addition to Network funding, the project has

received a large grant from LKIM. The UPM project is a good example of close cooperation with government fisheries agencies, extending in this case from planning through funding and implementation.

The fisheries economics group at Kasetsart University in Thailand will study the marketing system for shellfish and later expand the study to include fish and other marine animals. This study has also attracted additional funding from an ICLARM-GTZ (German Agency for Technical Cooperation) project to augment that provided by the Network.

The fisheries social science group at the University of the Philippines in the Visayas includes a fisheries economist (who participated in the non-degree course at UPM last year), an historian, a psychologist and a management specialist. This group will work together on some aspects of their study of small-scale fisheries in Iloilo Province, and separately on topics of special interest, such as household consumption patterns and preferences for fish and other meats, social relationships in the marketing system, management of fish processing industries, and the psychological characteristics of fishing households towards their source of livelihood.

The second round of research in each university will include the thesis research of their staff member studying at UPM. A fourth cooperating university will be identified in Indonesia later this year.

Because the Network is in its infancy and is attempting something new, it has started in only four countries and only four universities. In due course it is hoped that the program can be extended to other countries and universities in the Asian and Pacific region. The Network aims to assist in the development of a fisheries economics profession in Asia capable of sustaining a long-term research and teaching program.

For more information about the UPM non-degree and Masters programs in fisheries economics, readers are invited to write to the Dean, Faculty of Resource Economics and Agribusiness, Universiti Pertanian Malaysia, Serdang, Selangor, Malaysia. For information on the Network activities, write the author whose address during the next 12 months is 11 Jalan Taman Seputeh Tujoh, Kuala Lumpur, Malaysia.