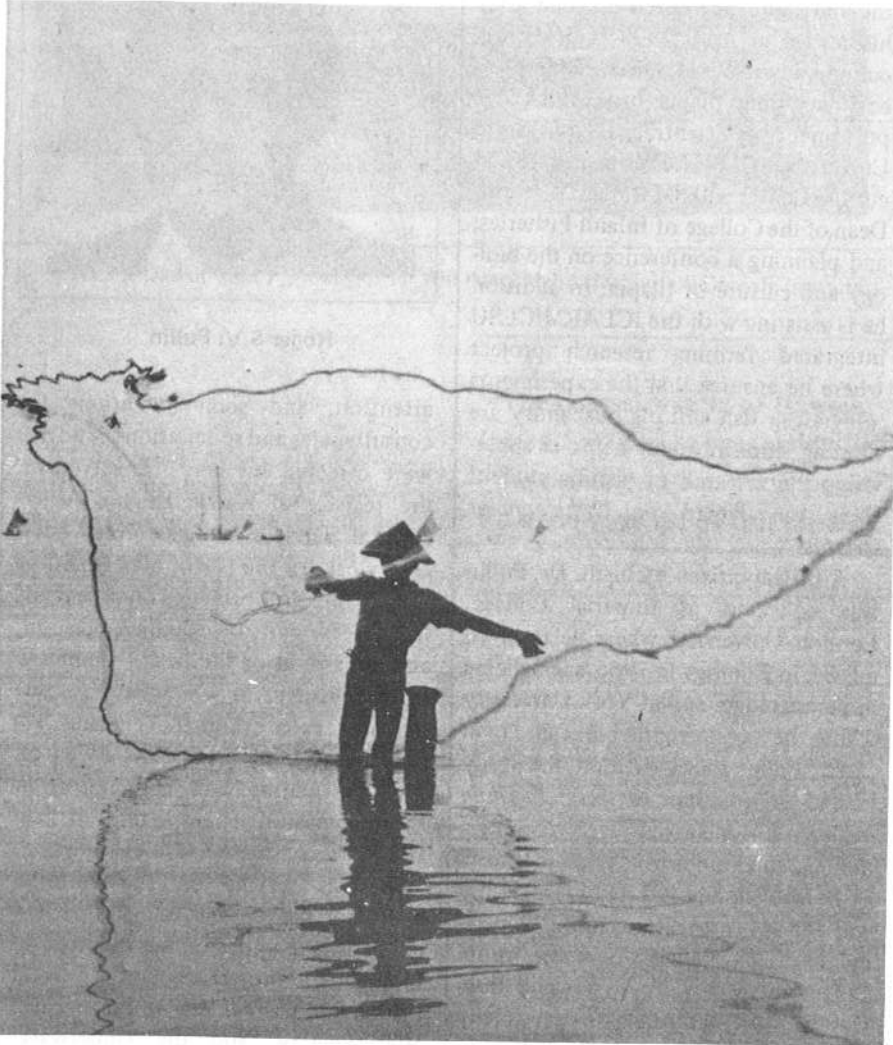


ICLARM'S TRADITIONAL FISHERIES RESEARCH PROGRAM

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Introduction

THE GENERAL conditions of poverty characteristic of traditional fishing communities around the world have increasingly drawn the attention of governments and other change agents in recent years, and have led to the initiation of development programs of varied hue and form. These programs, although expressing a variety of specific objectives, have as their urgent goal, implicitly if not explicitly, the raising of the standard of living of these communities. This objective is a recent addition to those generally ascribed to national fisheries development policies, which have on the whole concentrated on increasing production. This redirection of emphasis is important because it permits the search for solutions to the problem of low standards of living in fishing communities to expand beyond those areas which are fishery specific.

An emphasis on technological solutions that sought to improve vessels and gear has declined as the fundamental biological constraint of the 'open-access' resources exploited by traditional fishermen has been appreciated and as both biological and economic overfishing have been documented. Moreover, as evidence mounted that technology based development programs frequently exacerbated income inequalities within and between communities, the relevant constraints to raising the standard of living came to be recognized as primarily socioeconomic and institutional in nature. Consequently, solutions are beginning to be sought within the context of rural

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development programs that have as their objective a general uplifting of rural areas. The rationale for such an approach stems from the belief that fisheries should be seen as encompassing input supply, production, and distribution sectors, each with horizontal linkages to other sectors in rural areas. An appreciation on the part of planners and managers for the broad economic and social impact of fisheries programs which they may recommend is, therefore, required.

Despite the generalized approach implied by rural development schemes, however, there is a need to retain flexibility in programs and projects designed for fishing communities. Variability in resource availability and heterogeneity of fishermen and fishing communities imply the necessity for projects that are locale specific, that take into account the needs that fishermen themselves identify, and that appreciate the vertical and horizontal linkages that traditional fisheries and fishing communities have with other sectors and institutions.

There is an explicit link between development programs and supportive research endeavors. If the goal of development programs is to raise the standard of living of traditional fishing communities, the goal of research should be to expand and clarify the alternative choices available to decision makers, be they government policy makers or project managers, private entrepreneurs, or fishermen themselves.

The initial traditional fisheries activity of the International Center for Living Aquatic Resources Management (ICLARM) was to hold a South Pacific Small Boat Workshop in 1975. An ICLARM fishing dory has been donated to the Government of Fiji for fishing trials, and an adaptation of this design has been used to construct 26 dories in the Marshall Islands. Following this project, ICLARM invited a small group of social scientists to Manila in June 1978 to examine the problems of traditional fisheries and fishing communities and to recommend areas of focus for ICLARM's research program. The recommendations that resulted from this meeting were consistent with the earlier recommendations of ICLARM's

Program Advisory Committee in that they encouraged a focus on multidisciplinary aspects of traditional fisheries and on fishermen perspectives, and pointed out that research synthesis prior to initiation of new research endeavors could be particularly productive.

Accordingly, ICLARM staff have recently completed a monograph entitled "A Research Framework for Traditional Fisheries" which concentrates on the Southeast Asian Region.¹ A primary purpose of this monograph is to identify those areas of traditional fisheries research which have the greatest potential for contributing to the solution of problems facing traditional fishermen and their communities. To achieve this purpose, the monograph draws on both theoretical and empirical considerations available in the widely scattered literature of traditional fisheries. Following an overview which examines the goals and potentially conflicting objectives of development planning, a categorization of problems of traditional fisheries as either empirical or suppositional is proposed. The former involves the concrete difficulties facing fishermen such as limited resources, inadequate vessels and gear, lack of market power, lack of alternative sources of income, and inflation. The latter, on the other hand, involves the assumptions that decision makers bring to bear on matters of development policy, planning, and research. It is argued that fishermen and fishing community-oriented perspectives are essential to understanding the problems and prospects of development in this sector.

After tracing the changing emphasis of past development programs, the paper discusses alternative development strategies and analyzes the relevant theoretical predictions and research issues associated with each. The paper concludes with recommendations for concentration of ICLARM's traditional fisheries research program in the following three specific areas:

1. Development Policy Alternatives

¹Expected publication date is December 1979.

2. Post Harvest Technology and Marketing

3. Fisheries and Rural Development

The first of these three program areas provides the avenue for ICLARM headquarters staff to contribute to broad issues related to traditional fisheries development policy. The last two areas cover the two priority means identified by ICLARM through which standards of living in traditional fishing communities can be raised.

Significant by its omission from this list is research related to fishing fleet modernization as a means of increasing fishermen income, reflecting ICLARM's belief that long-term solutions to problems of low standards of living lie in reducing rather than in increasing fishing effort. Research related to coastal species stock assessment and development of appropriate management tools for traditional fisheries is covered by ICLARM's Resource Development and Management program.

ICLARM's plan is to develop institutional networks with cooperating institutions to stimulate research in each of the three topics of concentration. These networks are in various stages of development, building from the recommendations of the ICLARM research review.

Program Descriptions

PROGRAM AREA 1: DEVELOPMENT POLICY ALTERNATIVES

Much of the literature related to traditional fisheries remains scattered and generally underutilized. At the present time, ICLARM's research regarding development policy alternatives is concentrating upon research synthesis on a country by country basis. In cooperation with other fisheries organizations, ICLARM is preparing a series of publications that review research conducted to date on the problems of traditional fisheries and fishermen and alternative development policies and programs that seek to alleviate them. These reviews seek

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to summarize and generalize from previous research results and development experience, in the belief that valuable insights can be gained by taking stock of what is already known. Country specific papers, although of course varying in scope and underlying theme, cover resource, technological, socioeconomic and institutional aspects of traditional fisheries and fishing communities and are joint projects of ICLARM and institutions in the country concerned.

Two research synthesis projects are currently underway. The first of these covers the Philippines and is being conducted in cooperation with the Fishery Industry Development Council (FIDC), Ministry of Natural Resources. The resulting manuscript, entitled "Philippine Municipal Fisheries: A Review of Resources, Technology, and Socioeconomics" will be published in March 1980. A similar endeavor is underway in Malaysia, with the participation of two faculty members of Universiti Sains, Penang, and one faculty member of Universiti Malaya, Kuala Lumpur. Publication of this manuscript entitled "Small-Scale Fishing Communities in Malaysia: Options for Development" is expected by mid-1980. Summarizing and generalizing where possible, these country specific research reviews will provide government planners with concise comparative details of research results and will serve as a guide for identification of further cooperative research projects and appropriate co-operators for ICLARM. Similar reviews to these in the Philippines and in Malaysia are planned for other countries.

PROGRAM AREA 2: FISHERIES AND RURAL DEVELOPMENT

It is widely assumed that coastal fish resources are exploited at levels near, if not exceeding, the maximum sustainable yield. The lack of alternative income possibilities for fishing households and the relative ease with which landless workers can engage in low investment fisheries have led to continued high levels of fishing effort.

In addition to low levels of production and income, fishing communities

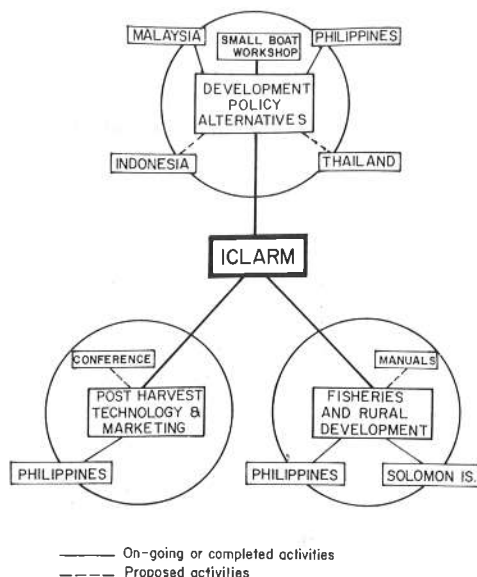


Fig. 1. Traditional fisheries research networks as identified through ICLARM research review.

are characterized by limited access to social services, including health and education, and by few employment opportunities outside the fishing sector. While integrated rural development planning has become fashionable, fishing communities generally have not been included within the target group, in part because of beliefs in their physical and cultural isolation.

The general objectives of this program area are to foster the incorporation of fishing communities into target groups for integrated and area rural development programs, and to identify and encourage fisheries and aquaculture based activities that would supplement household income, and thus indirectly reduce fishing effort.

Three projects are presently underway. One, being conducted by a Pre-doctoral fellow jointly sponsored by ICLARM and the Rockefeller Foundation, is a study of the skipjack tuna industry of the South Pacific and its impact on traditional fishing communities in the Solomon Islands. The second project is a multidisciplinary study of the municipal fisheries of San Miguel Bay in the Philippines, in coop-

eration with the College of Fisheries of the University of the Philippines and the Bureau of Fisheries and Aquatic Resources (Region IV). This latter project has stock assessment, economic, and sociological components, and is designed to complement a UP College of Fisheries research and extension project in fish processing. A study of occupational and geographic mobility of municipal fishermen will also be undertaken by a Rockefeller post-doctoral fellow as part of this multidisciplinary project. The third project underway is one of fish seed supply, a major source of supplementary income for traditional fishermen in Southeast Asia. ICLARM and the Southeast Asian Fisheries Development Center (SEAFDEC) will be jointly publishing a thesis on the milkfish fry industry of the Philippines, and this study will be extended to cover other species and other countries in the region.

PROGRAM AREA 3: MARKETING AND POST HARVEST TECHNOLOGY

An alternative to raising fishermen's incomes through productivity increases is to increase the price that they receive for their catch. The degree to which this can be achieved depends upon the extent of technological and price inefficiencies in the present distribution system, the prospects for removing such inefficiencies, and upon the success of developing new markets for presently underutilized species. The general objectives of this program are to determine the extent to which improvements in the efficiency of marketing systems will result in higher incomes for fishermen, and to encourage those improvements which will do so.

The initial activity planned by ICLARM is a workshop on Intermediate Technology and Alternative Energy Sources for Fisheries. The workshop will be a joint project of ICLARM, the Southeast Asian Fisheries Development Center (SEAFDEC), and the Bureau of Energy Development, Ministry of Energy in the Philippines. The proposal has been submitted to the Asian Development Bank for funding and the initial response has been encouraging. ●