

SCIENTIFIC ASSISTANCE TO CARIBBEAN FISHERIES

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Scientific Assistance to Caribbean Fisheries: An Overview

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Before proceeding with the formal presentations for the afternoon, I want to introduce the subject of Scientific Assistance to Caribbean Fisheries with some general remarks as to needs and some specific remarks on recent developments.

There is, of course, a wide range of institutions involved in scientific assistance here and elsewhere in the world. It is not my purpose to list or describe them, but rather to discuss some events of the past year that bear on this 31st Gulf and Caribbean Fisheries Institute and that may have a major impact on Caribbean fisheries affairs in the future.

First, I should like to relate this session back to last year's "Conference on the Development of Small-Scale Fisheries in the Caribbean," held as part of the 30th GCFI and sponsored by the University of Miami and the U.S. Agency for International Development. I think it is fair to say that most of this year's sessions stem from that conference, at which we were talking in rather broad generalities on needs in small-scale fisheries. I think we were all initially a bit aghast at the magnitude of the problem but the working parties that reported at the closing session did identify a number of specific needs and make a number of useful recommendations. The recommendations did not address scientific assistance directly, but certainly carrying them out will require a multidisciplinary scientific input. For example, the evaluation team on demand factors gave high priority to research in consumer demand, traditional markets, new markets, and small-scale fishermen's sensitivity to demand. The team concerned with processing, distributing, and marketing, considered that "research and studies should be undertaken to improve the traditional processing methods and to develop proper, simple technology using local materials." The need for research and scientific assistance was

implicit throughout all the team reports, and the need for a better scientific data base, education, training, and extension received special attention.

The activities of the Western Central Atlantic Fisheries Commission (WECAFC) and the WECAF project associated with it are of particular significance to GCFI and to this panel. WECAFC held its second meeting in Panama in May 1978 and in its final report noted that "the Commission should define priorities to direct the research effort to the most important species to determine their abundance and value and their present level of exploitation." Further, the Executive Committee considered that the Project should give priority to small-scale fisheries development, training, stock assessment, better product utilization, and fishery development planning. All this ties in closely with what was said at Cartagena.

Cartagena also helped set the stage for an effort just then getting underway, a U.S.-sponsored planning study of research needs in fisheries and aquaculture the results of which have recently been released. The report was prepared by a California firm, Resources Development Associates (RDA). What brought this study about was an amendment to the U.S. International Development and Food Assistance Act of 1975 which added a new section (Title XII-Famine Prevention and Freedom from Hunger) to the Act (Public Law 94-161, Dec. 20, 1975). The chief objective of the amendment is to bring about a substantial expansion of U.S. university involvement in helping to solve food and nutritional problems in the developing world. Fisheries are specifically written into the Title which states: "The term agriculture shall be considered to include aquaculture and fisheries" and "the term farmers shall be considered to include fishermen."

A significant part of the amendment deals with collaborative research, regarding which I quote from the RDA report:

"The major premises of collaborative research are:

"1. There are a number of agricultural and related problems common to both the United States and developing countries.

"2. Research conducted jointly among United States universities, research institutes in lesser developed countries (LDC's), graduate countries, and international research centers will result in discoveries of benefit to both the United States and LDCs.

"The concept of collaborative research involves a number of other characteristics which set it apart from the commonly accepted approach to foreign assistance. In addition to the multi-institutional aspect, collaborative research is to be: (1) funded jointly by AID and the U.S. college or university participants, (2) aimed at specific LDC problems with high pay-off potential, (3) supported over sufficiently long time periods to ensure continuity, (4) sufficient in scope to require joint or collaborative effort."

The RDA study was designed to identify long-range research needs in fisheries that would benefit the small-scale fisherman and fish farmer and that could be met through one or more Collaborative Research Support Programs (CRSP's). Essentially, RDA was asked, *inter alia*: (1) to identify needs as perceived by fisheries people in the developing world, (2) to identify the

capacity and interest of institutions in the developing world to participate in collaborative research, (3) to identify needs as perceived by U.S. universities, (4) to identify the capacity and interest of U.S. universities to participate in collaborative research, (5) to prepare a priority listing of research needs based on all the foregoing, and (6) to indicate the institutions, U.S. and foreign, best able to carry out programs in the priority areas. No small task!

Nonetheless, the work has been completed to the general satisfaction of those concerned. As one would expect, priority needs for assistance as perceived by the developing world and research needs that could be met through collaborative research were not necessarily the same. In addition, probably no two people would rank the proposed areas for collaborative research in the same way, but there was consensus among the RDA group that priority attention should go to studies of the principles and mechanisms of pond culture systems, of methodologies for resource assessment applicable in the developing world, and of causes and rates of catch spoilage in tropical waters.

The "Title XII Program" does not mean that all U.S. technical assistance will—or should be—funnelled through the U.S. university system and be devoted to research. It does mean, however, that collaborative research is in the forefront of the U.S. foreign assistance program at this time and hence is of particular concern to this session on scientific assistance. It is sure to have a major impact on U.S. foreign assistance in the years to come, and one of the speakers this afternoon will address the subject from point of view of the U.S. universities.

Several of us visited a number of developing countries during the RDA study, and certain themes kept recurring during our talks with their fisheries administrators and scientists. I hope foreign assistance planners will bear them in mind. They are these: (1) One basic need is for education and training at all levels so that the requisite professional and paraprofessional talent will be available over the long haul. Donors, and the U.S. is no exception, have had a habit of coming, doing great things, and departing without leaving a trained cadre. A few years later, you would never guess they'd been there. I add that this syndrome is not fisheries-specific. (2) Equally important in the eyes of the LDC's but dependent on the first point is the need for extension. (3) "Doer" projects—"We've been studied to death; when are you going to do something practical?" is a common complaint, deserved or not. And we and other donors do have a lot of shelf items, ready with little or no modification for application in a variety of field situations, that we probably haven't used as often or as effectively as we should.

Those three items tend to be generic. From the standpoint of fisheries alone, the development of a suitable governmental infrastructure to handle fisheries matters is a major concern. Fisheries offices in many countries tend to be one or two-man organizations, obviously not big enough, no matter how intelligent, well trained and dedicated the individuals may be, to cope with the complex matters of fisheries management and administration.

The proliferation of extended economic zones emphasizes the need for

trained personnel, and this is a problem of particular significance in this part of the world.

I recently visited a new African nation and the paragraphs that follow, based on my trip report, exemplify the nature of small-scale fishery problems in much of the developing world. They also highlight the areas in which American universities are in an admirable position to contribute: "(1) Stock assessment and population dynamics: techniques applicable in tropical waters, particularly marine and estuarine. The work being done in Central America by the University of Rhode Island is along these lines. A simple to apply quick-and-dirty way of getting first approximations is what is needed. (2) Statistics: how to obtain data of at least some statistical validity (confidence limits of half or double would represent a major leap forward) as to species composition, catch by species, and effort in multispecies tropical artisanal fisheries. (3) Food technology: how to minimize post-harvest losses in small-scale fisheries from time of capture to landing to market to consumer. (4) Fisheries administration and management: What sort of a system is (a) needed and (b) feasible in countries where fisheries programs must start at best at a very elemental level."

All of these points are included, in part at least, in the priority collaborative research recommendations made by RDA. All are recognized as problems—though not as severe—in the Caribbean region, which gave top priority, according to the RDA Report, to stock assessment, new fisheries development, and fisheries administration and management; and second priority to food technology, marketing and distribution. I hope at least some of these topics will be addressed in the collaborative fisheries research program that may have become a reality before the next meeting of GCFI.

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