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NATIONAL MARINE FISHERIES SERVICE

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Reply to Attn. of:

To: F14 Dr. Brian J. Rothschild, Director, Southwest Fisheries Center, La Jolla

From: F142 Richard S. Shomura, Director, Honolulu Laboratory

Subject: Trip Report - 7th Technical Fisheries Meeting, South Pacific Commission (Nuku'alofa, Tonga, 15-19 July 1974)

The 7th Technical Meeting on Fisheries was held at Nuku'alofa, Kingdom of Tonga, on 15-19 July 1974. The meeting was chaired by Mr. Tomasini Simiki, Director of Agriculture, Tonga. The following summarizes the highlights of the meeting:

1. Skipjack Tuna

Nearly all of the island countries and territories of the South Pacific consider the development of skipjack tuna fisheries as a high priority item for economic development and to meet the protein needs of the island communities. The current status of the skipjack tuna fisheries in the several areas are:

(a) American Samoa.--Surveys indicate occurrence of skipjack tuna in commercial abundance in American Samoa. Natural source of baitfish species is inadequate for any development of a pole-and-line fishery for skipjack tuna; therefore, the Office of Marine Resources is presently conducting culture trials of several species of "mollie."

(b) Fiji.--The UNDP-FAO project to survey the skipjack tuna and baitfish resources of Fiji was completed earlier this year. The results indicate that skipjack tuna occur in commercial abundance in the waters around Fiji. Unlike many areas of the South Pacific, Fiji appears to have an adequate supply of naturally occurring baitfish species for the development of a small pole-and-line fishery. Although the initial plans of the Government of Fiji involved undertaking a joint venture with a foreign fisheries company, we were informed at the meeting that the Government of Fiji has decided to undertake the development of the skipjack fishery by itself. This means involvement over the entire spectrum of the fishery including boatbuilding, training of fishermen, and the development of the production, canning and marketing aspects of the industry. From informal discussion, it appears that Fiji has looked on the one hand at the relatively easy time that the joint ventures in Papua New Guinea and the British Solomons encountered in developing a skipjack tuna fishery and, on the other hand, noted that the island governments have not received what is considered due share of economic benefits from the joint venture agreements. The development or lack of development of a

skipjack tuna fishery in Fiji will be observed very carefully by other island countries and territories over the next several years since many of these areas are still trying to seek a solution to their own development of skipjack tuna fisheries. Fiji plans to build up to a fleet of 10 pole-and-line boats within 5 years. The reason for limiting the number of boats is to provide a chance to monitor the fishing effects that the fleet will impose on the baitfish resource.

(c) French Polynesia.--The territory of French Polynesia is also looking toward the development of skipjack tuna fisheries. Currently they have an active small-boat (bonitier) fishery which lands approximately 500 tons per annum. Current plans are to convert the present bonitier fleet into a pole-and-line fleet made up of larger vessels. A study is being initiated to determine the extent of natural baitfish resources and the possibility of culturing baitfish in ponds. In connection with the latter, the Honolulu Laboratory has sent three shipments of threadfin shad to Tahiti by commercial airline. Only the third shipment was successful and six shad survived the Honolulu-Tahiti trip in June 1974.

(d) Gilbert and Ellice Islands Colony.--The colony looks towards the early development of skipjack tuna in order to counteract the anticipated loss in revenue from mining of phosphates. The phosphate mining is expected to cease in 1978. Although inquiries for possible joint venture agreements have been submitted to foreign elements, the colony has received no response to date. The results of a study conducted by the Japanese which indicated an inadequate supply of baitfish may have a bearing to the lack of interest. The UNDP recently initiated a study to culture baitfish in the Tarawa Lagoon. The initial work will be with the rearing of milkfish (Chanos chanos) in ponds. The young of this species will be taken from the wild and grown in captivity. In addition, it was noted that surveys of the tuna resources around Christmas Island are being carried out.

(e) New Caledonia.--Development of the skipjack tuna fishery is still in the planning stage. One of the first projects planned is to conduct a survey of the baitfish resources around New Caledonia.

(f) Papua New Guinea.--Papua New Guinea represents the prime evidence that new skipjack tuna fisheries can be developed in the Pacific. The fishery, which was initiated in 1970 by joint venture agreements with foreign companies (Japanese and United States) caught approximately 28.3 thousand metric tons in 1973. To date, fishing in 1974 has been good; at the current rate, the 1974 catch is expected to exceed the 1973 high. It is estimated that the 1974 catch will exceed 35.0 thousand metric tons. The present fleet numbers 55 Okinawan-type pole-and-line vessels.

(g) Tonga.--The Kingdom of Tonga has submitted an application to the United Nations Development Program for support to investigate the skipjack tuna and deepwater bottom fishery resources of the area. The fisheries people in Tonga are currently conducting a baitfish survey.

(h) Trust Territory of the Pacific Islands.--The Palau skipjack tuna fishery is having a very good year. In April the catch exceeded 1,000 tons. The fleet currently consists of three Micronesian and six Okinawan boats. Interestingly, it was reported that the Okinawan boats were being crewed by Korean fishermen.

(i) Western Samoa.--An FAO Master-Fisherman (Mr. Walter H. Paulo, former skipper of the Townsend Cromwell) reported for duty in Western Samoa in January 1974. He is currently conducting a tuna baitfish study and hopes to carry out pole-and-line fishing for skipjack tuna aboard a small FAO-built fishing craft.

One of the principal topics discussed at the meeting was a proposed SPC-sponsored major skipjack tuna tagging program. The proposal was recommended by the Expert Committee on Tropical Skipjack organized by the South Pacific Commission. It is hoped that a suitable tagging vessel will be obtained from a donor country. The plans are to carry out extensive skipjack tuna tagging over a 2-3 year period throughout the South Pacific Commission area. It is expected that the results will provide information for stock identification, migration paths of the skipjack tuna and a possible assessment of the size of the skipjack tuna resource in the western and South Pacific. Additionally, the vessel is expected to carry out a great deal of baitfish research and general skipjack tuna survey work in the South Pacific Commission area.

At the request of the Expert Committee on Tropical Skipjack, the Honolulu Laboratory developed a daily tuna catch record form and a form to collect size and sex data of skipjack tuna. There was general agreement that the assessment of the skipjack tuna resources of the central and western Pacific can only be evaluated with data collected under a uniform format.

I provided participants of the meeting with a brief summary of the baitfish workshop held in Honolulu in early June. Participants were very interested in the workshop since many of the areas of concern to the South Pacific Commission are faced with a baitfish supply problem.

2. Dory Project

Several years ago the "Oregon dory" developed by Barry Fisher of Oregon State University was considered the solution for many of the vessel problems faced by the island governments and territories. Presently there are mixed feelings on the suitability of the dory in some areas. Presently dory fleets are operating in American Samoa and Ponape. In American Samoa the major problem has been mechanical failure with the inboard-outboard engines. Present plans are to convert to a diesel engine operation. In Ponape the dories are outfitted with a jet-drive engine. The initial problem encountered with cavitation has been resolved by installing a skeg on the bottom of the vessel.

The South Pacific Commission is currently funding a project to compare a standard dory with an aluminum version. The project will initially be carried out in New Hebrides. It is hoped that the results of the study will indicate whether aluminum has a superior advantage over the standard plywood hull of the current dory.

One interesting comment made by an observer was that the dory cannot be viewed as the salvation of all situations. As an example, in American Samoa, where deepwater facilities are available, a shallow draft should not have been considered necessary. In the observer's opinion, a V-draft would provide for better stability and better riding characteristics. On the other hand, Ponape, which has very limited deepwater facilities, appears to be very satisfied with the shallow-draft Oregon dory.

3. Outer Reef Artisanal Fishing Project

There was considerable discussion on the outer reef resources, primarily because most of the island countries and territories are looking to the outer reef resources as a means to meet their domestic protein needs. Presently there are a number of plans for the outer reef project, including separate plans prepared by the South Pacific Commission, UNDP-FAO, and ICLARM (International Center for Living Aquatic Resources Management). The latter is an ambitious program proposed by the Rockefeller Foundation.

One of the major problems with the utilization of outer reef resources is that of ciguatera. In areas where fishing of the deeper water species is already being carried out, e.g., American Samoa, a considerable part of the catch is being discarded because of potential ciguatera problems. It was noted at the meeting that Dr. H. Banner of the University of Hawaii is currently working on the ciguatera problem. One of the priority needs of the South Pacific Islands area is a method of rapidly determining the level of ciguatera toxin in individual fishes.

4. Turtles

It appears that this is the Year of the Turtles. On the basis of several presentations, it appears that nearly all of the participating countries and island territories are working on sea turtles. Turtle projects are currently being carried out in the Trust Territory, Fiji, Tonga, Cook Islands, Western Samoa, and Papua New Guinea. The meeting avoided making a recommendation on turtles which could be construed by governments to initiate or expand projects on farming or ranching of green turtles.

5. Aquaculture

Aquaculture projects are still being pursued in many of the island countries and territories. It is encouraging to note that, during the discussion on aquaculture, there was continued reference to the need

to evaluate the aquaculture activities on an economic basis. As an example, CNEXO (Centre National pour l'Exploitation des Oceans) believes that a Malaysian prawn culture operation in Tahiti is economically viable; however, this is probably not true for most of the smaller island communities where the demand for high-priced prawns is limited and an export industry is not feasible.

6. Others

(a) UNDP Regional Office departure from Western Samoa.--In early June the Government of Western Samoa informed UNDP to vacate their regional office from Western Samoa. From available information it appears that the request from the Prime Minister of Western Samoa that the UNDP Regional Officer, Mr. Hussey, be retained for an additional period beyond his scheduled retirement was rejected by UNDP. Dr. Ray Fort, Acting Regional Officer, and Erling Oswald, Regional Fisheries Coordinator, and their families departed from Apia, Western Samoa during the week of 15 July. The UNDP Regional Office will be temporarily headquartered in Manila, Philippines.

(b) International Center for Living Aquatic Resources Management (ICLARM).--The Rockefeller Foundation recently initiated a "Proposal for the Creation of an International Center for Living Aquatic Resources Management." My understanding is that the Rockefeller Foundation will provide the funds necessary to get his center started. Subsequently the program will be carried on by obtaining grants and funds from other sources. In a nutshell, the proposal appears to undertake activities similar to that conducted by FAO; e.g., fisheries development, aquaculture, research and development, food technology, socio-economic considerations, etc. If the program is funded it could mean additional financial and manpower input into the island countries and territories belonging to the South Pacific Commission.

(c) Statistics.--Arrangements were made to obtain longline catch statistics from fleets based in Fiji and New Hebrides. These data will assist in evaluating the South Pacific albacore resource. Obtaining these data could not have been made as easily without the personal contact opportunities that meetings such as the 7th Technical Fisheries Meeting provide.

(d) General comments.

1. There appears to be a tendency for many of the island governments and territories to undertake too many little projects without proper consideration given to national priorities and without adequate manpower and funds. This lack of critical mass is probably the singlemost shortcoming preventing success of many of the projects. In many areas, there are knowledgeable individuals; however, the multitude of problems simply overwhelms the understaffed personnel.

2. In many instances, it appears that programs are undertaken without complete thought given of the utility and economic benefit. The tendency is to pursue "fad" projects. As an example, in a number of areas, projects are still being planned for the culture of Macrobrachium prawns without having a critical review of its potential economic viability.

Attachment: List of participants

cc: F4 Office of International Fisheries