

## AQUACULTURE

The following information was developed during the meeting of 2 November, 1970, to provide a basis for decisions regarding the most appropriate locations for study, species to be considered and consultant time required.

American Samoa - Interested in culture of edible oysters and Manila clam; some native oysters and clams are present but in small quantities. Also have supplies of Samoan crab Scylla serrata and are interested in management of the resource.

One lagoon appears suitable for aquaculture but nothing is known about its physical parameters.

Consultant time: 10 days if during the next four months; 6 or 7 days if delayed beyond that period.

Fiji - interested in aquaculture of molluscs to supply local market which has increased, because of tourism and to provide livelihood for local people. Have budgeted for a five-year aquacultural development programme and will have funds available for oyster culture project in calendar 1971.

Have native mangrove oysters, most of which are stunted. There is some potential for developing an industry based on these oysters.

In addition seed oysters from Australia (Crassostrea commercialis), Hawaii (C. virginica) and Japan (C. gigas) have been planted at Bilo Bay. Some of these species may also be used in the five year aquacultural programme.

Have good supplies of mangrove crabs and are interested in management of the resource.

Have mullet stocks which may provide a basis for aquaculture.

Have mother of pearl shells, Pinctada morgoretifera, and one

venture regarding pearl culture. Size of the project is limited by availability of mother shells so are interested in shell cultivation.

Have some information regarding sanitary conditions of areas used for oyster culture and have made some measurements of salinity.

Consultant time: Initial survey of 3 weeks; action programme 3 to 4 months.

French Polynesia - Very interested in industrial development of marine aquaculture of mother of pearl shell, pearls, edible oysters and shrimp.

Have planted Japanese oysters (C. gigas) received through cooperation of Dr Takeo Lenai and are considering the possibility of establishing a hatchery to produce seeds.

The CNEOX project in French Polynesia will concentrate on shrimp culture initially using Macrobrachium which is present throughout the South Pacific and later the Japanese prawn Penaeus japonicus. Pr Doumenge suggested that the applied programme of CNEOX should be included or coordinated with the SPIFDA programme of marine aquaculture.

French Polynesia has an extensive pearl shell culture programme underway in the Tuamotus under the direction of William Reed. Three or four Tahitians working on this project have technical training and practical experience in pearl shell culture. Because of the extensive knowledge of Mr Reed and his staff it appears that surveys of the Tuamotu area will not be required.

Consultant time: One week in Tahiti area but best to delay visit until end of period when infrastructure of local programme will be more completely organized.

Gilbert and Ellice Islands Colony - Interested in culture of mullet and milkfish in Gilberts and in revival of black lip pearl shell culture in the Ellice group and at Christmas Island. Wants a consultant on pearl shell

culture to come to Funafuti early in 1971 when vessel and personnel will be available.

Consultant time: Consultant on pearl shell culture should spend one week at Funafuti early in 1971.

New Caledonia - Interested in farming edible oysters. Native mangrove oyster stocks were depleted about 5 years ago. Management regulations have been imposed to provide seasonal closures of four months. One experimental oyster farm was established toward northern end of New Caledonia. In 1967 a private oyster farmer was granted a concession on the west coast about 100 km. from Noumea.

ORSTOM gives technical advice on oyster farming and has information on salinity and temperature in various areas.

Consultant time: One week for initial overview of area and inspection of farming sites plus periodic visits during time available in New Caledonia.

Territory of Papua and New Guinea - some history of mangrove oyster culture many years ago but project failed. Have planned a project with Dr Wada, Japan, for culture of gold-lip pearl shell. No further interest in aquaculture at this time because practical application of information is improbable.

Consultant time: None at this time.

Western Samoa - Since all reefs and lagoons are common property there is virtually no opportunity for aquaculture.

Consultant time: None at this time.

Cook Islands - Since all reefs and lagoons are common property there is virtually no opportunity for aquaculture.

Consultant time: None at this time.

British Solomon Islands Protectorate - some potential for pearl shell culture in Western district.

Consultant time: Consultant on pearl shell culture should schedule two weeks for this area.

Trust Territory of the Pacific Islands - Interested in edible oysters and have some work in progress mainly aimed at improving shape of the mangrove oyster by use of better collecting surfaces. In many areas *Tridacna* have been fished out but in Truk, Guam and Ponape fishable stocks remain. Management procedures are needed.

*Trochus* is in good supply but there is a growing demand.

The black lip shell *Pinctada margaretifera* is not in commercial abundance. At Palau a prewar Japanese project introduced gold lip shell for pearl culture. An expert who once worked for Mikimoto is available and plans have been made to re-establish a small local pearl industry principally for the tourist trade.

Have a government project to identify larval forms of *Pinctada* but need help.

Also are interested in marine fish aquaculture at Palau using a local species of rabbit fish (*Sagonidae*). Have a biologist working on life history. Since this fish feeds on algae there is a possibility of combining fish and mollusc culture.

The mangrove crab is present at Truk, Palau and Ponape but may not be adaptable to aquaculture.

Some oceanographic information is available at the University of Hawaii from pre-war Japanese studies and some recent studies in the Marshalls but little hydrographic information is available concerning most inshore areas.

New Government laboratory is to be built at Palau and will have a staff of 4 to 5 with space for 4 to 5 visiting scientists.

Micronesian Institute plans a new laboratory which will conduct more basic studies which will provide information for exploitation and development of resources of the Trust Territory. The Institute has an 80' boat which is well equipped for scientific research.

Consultant time: Wants consultant in aquaculture to come to Palau, Truk and possibly Yap which would take about 3 weeks. A visit to Ponape would require an additional week. A longer period including consultants on fish and perhaps pearl shell culture would be required for an action programme involving test plantings.