UNDP/FAO/SPC

SOUTH PACIFIC ISLANDS FISHERIES DEVELOPMENT AGENCY

REPORT

OF THE

FIRST MEETING

OF THE

CONSULTATIVE COMMITTEE

Noumea, New Caledonia 30th October - 4th November, 1970

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terms of reference as laid out in particular in para. 6.3 of the signed Plan of Operation.

It is our view that the Committee's rôle is not only to support the finally agreed programme of work and to secure the necessary counterpart support from the participating governments, but also to review, comment and advise on the whole SPIFDA programme (including the design of subprojects) within the framework of the Plan of Operation. These functions we consider to be of vital importance in this project which has to meet the varied requirements of territories widely scattered over a large area with diverse levels of development.

In particular, we see one of the key functions of the Committee is to review and comment on the detailed programme of work presented by the Manager and Co-Manager in order both to ensure that it is correctly orientated with regard to the needs and priorities of the region and also to provide for the maximum input to the project from the participating territories and the SPC.

In accordance with normal practice, the Project Manager will take full account of advice and comments expressed by the Consultative Committee, or, in the inter-sessional periods by the Chairman, in the formulation and implementation of the programme, obtaining the agreement of the FAO head-quarters as required. In this connection it is understood that the Project Manager will be responsible for keeping all members of the Consultative Committee and other interested parties informed of the progress of the project.

Yours sincerely,

(Sgd)

N. Kojima

Senior Officer

(Project Operations)

Department of

Fisheries,

FAO, Rome, Italy.

en de la companya de Recepto de la companya de la company M. Priestley
Deputy Regional
Representative,
UNDP, Apia,
Western Samoa."

REPORT OF THE PROJECT MANAGER

After a brief introductory statement by the Project Manager, the Report of the Project Manager and Co-Manager to the Chairman of the Consultative Committee (CONCOM/1/70/WP.3 rev.) was received.

The Committee discussed in detail the question of reporting and agreed that the Project Manager would report at regular intervals on the activities and on the development of the programme of the Project to ensure that members of the Committee, territorial administrations, participating Governments and the South Pacific Commission are kept fully informed.

UNDP/FAO/SPC

SOUTH PACIFIC ISLANDS FISHERIES DEVELOPMENT AGENCY

FIRST CONSULTATIVE COMMITTEE MEETING

MEETING REPORT

Noumea, 30th October - 4th November 1970

INTRODUCTION

At the request of the Secretary-General, South Pacific Commission, the First Meeting of the SPIFDA was convened at SPC headquarters, Noumea, New Caledonia, on Friday, 30 October, 1970.

Members of the Committee were: Dr Stanley Swerdloff (American Samoa), Mr Albert Adams (Fiji), Prof. François Doumenge (French Polynesia and New Hebrides), Mr James Hughson (Gilbert and Ellice Islands Colony), M. Jean-Jacques Eude and M. Michel Legand (New Caledonia), Mr Gregory Graham (Territory of Papua and New Guinea), Mr Peter Wilson (Trust Territory of the Pacific Islands) and Mr William Travis (Western Samoa).

Also attending as Consultative Committee Members were Mr Alan Harris (SPC), Mr Michael Priestley (UNDP), Mr Nakaji Kojima (FAO), Mr Alan Tubb, Project Manager, and Mr Valentine Hinds, Project Co-Manager.

Consultants attending were Dr Ray George, Mr John Glude, Mr John Fyson and Dr Robert Clutter.

The Government of France was represented by M. Jean Emond.

The Meeting was formally opened by the Secretary-General of the South Pacific Commission (Annex I) and Mr Peter Wilson, the Representative from the Trust Territory of the Pacific Islands was elected Chairman (Annex II). Following the adoption of the Agenda (Annex III) and the appointment of Rapporteurs, the UNDP Representative gave a brief statement outlining UNDP procedures and operations. The FAO Representative also gave a brief statement outlining FAO's procedures and operations.

TERMS OF REFERENCE OF THE COMMITTEE

The Committee considered that its terms of reference as set out in SPIFDA Plan of Operation paragraphs 6.1 to 6.3 required clarification and, following a searching and detailed discussion, accepted the formal letter, whose contents are given below, signed jointly by the representatives of UNDP and FAO as a basis for its present and future operations.

"The Chairman, Fishery Consultative Committee.

Dear Mr Chairman,

As you are aware, your Committee has asked the undersigned, as representatives of UNDP and FAO, to amplify and clarify the Committee's

The reporting system adopted should be designed in such manner that the parties concerned are informed in good time of anticipated visits to territories of Project Consultants, and of the counterpart facilities and services required.

On the matter of Travel Reports, the Committee noted the procedural requirement of the Executing Agency, FAO, and requested speedy clearance of such reports if required so that they could be freely distributed for the information of interested parties.

The Committee agreed with a proposal that each Territory should provide the Project Manager with a list of equipment and services which could be made available on request to visiting consultants and experts.

BUDGETARY REVIEW

The budgetary provisions for the operation of the Agency were discussed and it was noted that pre-inception costs for the operation of the Agency were met from an Advance Imprest Account and that formal reconciliation of expenditure would be made at the termination of the Project, if necessary calling upon UNDP contingency funds to meet any over-expenditure incurred by pre-inception activities. It was noted that such costs were chargeable against the Agency through UNDP and that there was no counterpart component.

The Committee also noted that the salary of the Project Manager commenced from the date of his recruitment about 16 months before the date upon which the Project became operational (22nd July 1970).

The Committee requests that appropriate steps be taken to ensure that the above circumstances would not lead to a reduction in the effective period of operation of the Project (i.e. 36 months) including the services of the Project Manager.

SPIFDA PROJECTS

AQUACULTURE PROGRAMME

Review

Comments from Territory Representatives indicated the need for correction of the Draft Programme of Work (CONCOM/1/70/WP.4(rev.)) to eliminate errors in paragraph 2, to redefine objectives in paragraph 3 and to provide a more detailed description of Work Plan and Schedule in paragraph 4.

Comments

A sub-committee was appointed to redraft the Programme of Work in accordance with comments and corrections offered by Territory representatives and consultants and this redraft is attached as Annex IV.

During a detailed discussion, representatives of each Territory were asked to indicate their areas of interest in Aquaculture, status of local projects, extent of knowledge of hydrographic conditions in areas having potential for aquaculture and the time needed for site visits and field investigations by consultants. A summary of this information is attached as Annex IV.

THE CONSULTATIVE COMMITTEE RECOMMENDED

- 1) the acceptance of the revised Programme of Work for the Aquaculture sub-project, Annex IV;
- 2) the scheduling of travel by consultants based on a summary of the desired programmes as shown in Annex IV.

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BECHE-DE-MER INDUSTRY DEVELOPMENT

Review

The Committee reviewed the background, justification and objectives of this sub-project.

Comments

In view of the particular interest of the Trust Territory of the Pacific Islands and the Territory of Papua and New Guinea it was agreed after discussion to re-define the justification, objectives and work plan and schedule to bring them more into line with the specific requirements of the interested territories. (see Annex No. V).

The principal requirement of the sub-project is for a definitive handbook covering identification, collection, processing, packaging and marketing to permit the efficient exploitation of an existing resource.

THE CONSULTATIVE COMMITTEE RECOMMENDED

- 1) that the field work should be concentrated in the two named territories on the assumption that results would be of general application elsewhere in the Pacific;
- 2) that the qualifications of the biologist should include general experience in marketing and underwater photography;
- 3) that the use of market research consultants should be considered to assess the potential and economics of the industry.

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SPINY LOBSTER PROGRAMME

Review

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Comments from the Territory Representatives confirmed the background, justification and objectives as set out in the Draft Programme of Work (CONCOM/1/70/WP.4 rev.), but pointed out that the resource is almost certainly limited and would be for local consumption rather than export of processed product.

There was a need to make initial surveys into as many areas as possible in the time available so that urgent regulatory precedures for the management of local resources can be assessed for each of the areas.

Government counterpart support was available in most areas but information of specific requirements of the consultant and the availability of such requirements must be exchanged.

Comments

The importance of conservation as noted in the sub-project title itself must be re-emphasized, since past pilot commercial ventures for Lobster have not been encouraging (e.g. Tonga, British Solomon Islands). Nevertheless small-scale fisheries supplying local requirements should be viable.

An extension of the objectives should include attempts to increase the resource through the design of suitable artificial shelters. Also a programme to trap the last pelagic larval stages (puerulus) might be investigated to gauge population size or to indicate nursery prospects.

The work programme should take note of the following requests by representatives to facilitate their participation in the sub-project.

- 1) To review the present viable fishery and consult with the full-time biologist in New Guinea about 14 days in January 1971.
- 2) To obtain catch and effort data of previous fisheries in Tonga, British Solomon Islands, New Hebrides (10 14 days each).
- 3) To assess likely level of sustained exploitation and advice on regulatory measures in areas of:
 - a. Probably reasonable potential paragrams while Laber a water Dan and the

New Hebrides (10 - 14 days)

Fiji (3 weeks)

Gilbert and Ellice Islands (Full survey but not till 1971)

Trust Territory $(5\frac{1}{2}$ weeks for full survey or 7 days to discuss results of Mr Craig MacDonald's research)

French Polynesia (3-5 months for full survey or 4-6 days at Papeete to investigate local potential)

b. Probably low potential -

American Samoa (3-4 days)

Western Samoa (5-6 days)

New Caledonia (5-6 days)

THE CONSULTATIVE COMMITTEE RECOMMENDED that:

- 1) the sub-project objectives as set out in the Draft Programme of Work be confirmed with the addition of "(particularly with reference to increasing the resource through artificial shelters and by nursery of post larval stages)" after "desirable" (p.6 7th line from bottom page); (Annex VI)
- 2) when scheduling the consultant's movements, the Project Manager should take full note of the Territories' requests to facilitate their participation and advise the Territories rapidly of revisions of the planned work schedule.

MARINE TURTLES

- 1. Title: Marine Turtles Conservation and Management
- 2. Background and Justification:

The two main marine turtle species of the South Pacific are a valuable source of food for the island peoples. As human populations increase predatory pressures upon these valuable stocks must also increase; thus increasing the need for rational utilization of the stocks. (Annex VII).

3. Objectives:

To conduct an initial survey into existing turtle stocks within the area of the Territories; to establish a programme for the re-stocking of selected and suitable depleted areas with juvenile turtles; to make a preliminary study of the potential, in selected territories, for turtle ranching; to formulate suitable general protective legislation capable of being adopted by the territories.

THE CONSULTATIVE COMMITTEE RECOMMENDED

- 1) that the services of the Marine Turtle Consultants be utilized for:
 - (a) initial overall rapid assessment of existing turtle stocks within the region;
 - (b) follow-up programmes consisting of development surveys concentrated on individual promising territorial sites. It was felt that not more than three, and preferably two, sites only be selected. In this connection the claim by Western Samoa, who were already operating a

Green Turtle hatchery; and by the Trust Territory, who had had valuable experience in Hawksbill rearing, should be given priority.

- If recommended by the Consultant, the Agency would make funds available for the inter-territorial transportation of turtle eggs on a pilot scale from remote unprotected areas to established regional turtle hatcheries.
- That co-operation between territories on the question of egg-collecting and hatchling distribution be encouraged and also on the distribution of related information.
- 4) That a standard turtle-tagging programme be instituted and that funds for the reward of returned tags be sought by the Agency, and that each reward be the equivalent of US\$ 5.00, in line with general world-wide turtle tagging programmes.
- 5) That all territories be encouraged to introduce uniform protective legislation aimed at assisting present turtle stocks to increase.

FISHING BOAT DEVELOPMENT

The Consultative Committee agreed that the approach to problems of fishing boat development should be broadly based and include consideration of the use of materials other than ferro-cement.

THE CONSULTATIVE COMMITTEE RECOMMENDED

that the programme of work for the consultant should be designed so that he would:

NEW CALEDONIA

- 1) advise the Government of New Caledonia on construction standards for ferro-cement boat-building
- 2) investigate the possibility of commercial construction of ferro-cement vessels to replace existing wooden boat-building

Time required: 3 months

FIJI

- 1) work in liaison with construction authorities and advise on construction, deck layout and internal arrangement of two research vessels of 48 and 70 feet LOA
- 2) investigate requirements for fishing vessels in Fiji and provide suitable designs to fill these requirements
- 3) supervise construction and train personnel during the building of at least one and possibly two ferro-cement boats

- Time required: 8-9 months 1) investigate the requirement for fishing vessels in handless to a seek as the territory
- 2) advise on construction details of pilot project ferrocement fishing vessel in course of construction

- 7) provide design layout and arrangement drawings and equipment specifications for a suitable ferro-cement fishing vessel
- 4) assist the Government in negotiations with commercial companies willing to provide the technical expertise to build this type of vessel or alternatively arrange a training course and supervise the building of such ferro-cement fishing boats

Time required: 4-5 months

TRUST TERRITORY OF THE PACIFIC ISLANDS

- 1) investigate fishing boat requirements in the territory
- 2) advise the Government on design and construction and/or procurement of a range of fishing vessels including a small research vessel, offshore tuna bait boats, inshore lagoon fishing boats, diesel utility boats and small high speed boats for lagoon operation
- 3) advise on the possibilities of building ferrocement boats where applicable in the above requirement
- 4) supervise construction of at least a prototype ferro-cement vessel should the use of this method of construction be adopted

Time required: 4 months

COOK ISLANDS

- 1) assist the Government in the design and procurement of 6 semi-displacement fishing boats of approximately 30 feet LOA
- 2) investigate and advise on future vessel requirements in the territory

Time required: Minimum 1 month

GUAM

- 1) investigate requirements for fishing vessels in the territory
- 2) advise government on possibility for ferrocement building of a suitable design
- 3) possible follow-up to include supervision of building programme of ferro-cement boats

Time required: 2-4 weeks minimum

GILBERT AND ELLICE ISLANDS COLONY

- 1) investigate requirement and advise on design of suitable ferro-cement prototype for use in the Line Group
- 2) possible follow-up to include setting up of building programme for a maximum of 45 boats (not definite)

Time required: Initially 2 weeks

FRENCH POLYNESIA

Following on recommendation of the SPC Fourth Technical Meeting on Fisheries, investigate the Tahitian light displacement, high speed bonito boats to ascertain their suitability for adoption with or without modification in other parts of the region where a similar requirement may exist

Time required: maximum 2 weeks

AMERICAN SAMOA

- 1) advise Government on design, layout, arrangement, specifications and procurement of a small research vessel
- 2) investigate requirements for fishing vessels in American Samoa and provide suitable designs and procurement information to fill these requirements

Time required: 1 week

Noting that the foregoing programme covered approximately 21 months' exclusive of travel time, and that the Consultant would be stationed in Suva, the Consultative Committee endorsed the suggestion that the lengthy period required for Fiji might be funded on a basis of a UNDP Technical Assistance request, separate from the Agency's programme. The representative of Fiji agreed to approach his Government on this question and to keep the Committee informed of the results.

PEARL SHELL LURE

As a result of considerable discussion during the Fourth SPC Technical Meeting on Fisheries, most of the territories expressed a desire to adopt the pearl shell lure fishing technique in their skipjack fisheries. It was recognized that skill must be acquired in fabrication as well as utilization of the pearl shell lure. It was suggested that trainees work in Tahiti, where the technique is most advanced. Following this training, a Tahitian expert might demonstrate techniques in the developing territory.

THE CONSULTATIVE COMMITTEE RECOMMENDED

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- 1) that SPIFDA funds, covering travel and subsistence, be made available to fishermen and fisheries training officers from developing territories, enabling them to acquire fabrication and utilization skills from the Tahitian pearl shell lure fishery
- 2) that an expert in the pearl shell lure technique be provided for those territories which desire additional demonstration of this technique.

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BAITFISH

The Consultative Committee discussed the present and future importance of baitfish to developing tuna fisheries, and recognized the possible danger of depletion of baitfish stocks by intensive industrial exploitation. It was felt that SPIFDA should gather information on the effects of present live-bait fisheries (e.g. Palau, New Ireland) on baitfish stocks. Although development of baitfish cultivation techniques cannot be ignored, SPIFDA involvement must be deferred until availability of funds is ensured.

THE CONSULTATIVE COMMITTEE RECOMMENDED

- 1) that travel and subsistence funds be made available so that trainees from interested territories may participate in existing baitfish programmes in Fiji, Trust Territory of the Pacific Islands or Gilbert and Ellice Islands Colony
- 2) that close liaison be maintained between the SPIFDA Project Manager and those territories with existing live-bait fisheries in order to assess the effects of exploitation on bait stocks.

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REEFS AND LAGOONS

Review

The Committee reviewed the background, justification and objectives of this programme. As a result the following amended version was prepared.

1. <u>Title</u>: Productivity of reefs and lagoons, with reference to fisheries

2. Background and Justification:

Reefs and lagoons are intimately associated with most South Pacific Islands and with all atolls. They are integral parts of the human habitats of these regions - they protect the land, form harbours, and provide high value protein food. The natural beauties of clean lagoons and colourful reefs are a source of pride to Pacific Island peoples and are unparalleled attractions to tourists.

But despite their widespread importance and their recognized value, the coral reefs and lagoons are poorly understood, and reports about them are usually fragmentary. Evidence shows that stresses may be imposed on the finely balanced reef-lagoon biological systems by thougless human actions such as uncontrolled mineral exploitation and uncontrolled pollution.

Imbalances in the natural components also occur, such as the crown-of-thorns starfish. Many reef and lagoon fisheries are underproductive because of overfishing. Failure to develop management practices in keeping with increases in population growth, tourism, and pollution could cause island fisheries to become depleted to the point of extinction. But it is clear that fishery production from the reefs and lagoons can be enhanced and stabilized through management, and enormous increases in production may be possible in the future through careful and thoughtful manipulation.

3. Objectives:

The Project seems to divide naturally into four parts:

- <u>First Part</u> Assessment of basic knowledge about the reef and lagoon resource and its present state, including a review of past research and research now in progress.
- Second Part Evaluation of the present state of the fisheries in the South Pacific Islands, including fishing methods, intensity, catch statistics and resource potential. The needs of the sub-regions and the possible effects of population increase on needs and on the state of the resource will be included.
- Third Part Development and application of management procedures for reef and lagoon fisheries.
- Fourth Part Identification of the possibility and desirability of manipulating reef and lagoon environments to increase fishery productivity.

4. Work Plan and Schedule

The work plan for the first part of the sub-project will include visits to universities, research facilities, museums and libraries in the South Pacific region and elsewhere to obtain published information and precise first hand information about research projects.

Work on the second part of the sub-project will overlap the first part. Results of previous reef and lagoon resource surveys will be examined and new information will be solicited from territorial representatives. At the same time consideration will be given to establishing a collection and dissemination centre for information concerning reefs and lagoons.

The feasibility of parts 3 and 4 of this sub-project will be assessed after a high level review at a Colloquium which will discuss the implications of the results of parts 1 and 2 of this sub-project on the other related programmes. Further, it is expected that the Colloquium will indicate areas where additional research is required, draft programmes for such research, and prepare information briefs and requests to international and other aid-giving agencies for assistance in implementing such programmes.

The third and fourth parts of the sub-project are probably beyond the scope of direct activity within SPIFDA alone and therefore probably will be implemented through another UNDP project or through funds from other aid-giving agencies, as appropriate.

The fourth part of the sub-project involves a larger concept of aquaculture which requires some clarification. Although it is possible for conventional aquaculture to be conducted without materially affecting the general reef and lagoon environment, large-scale schemes must be approached through cautious experimentation. Carefully conceived and monitored schemes

to manipulate naturally enclosed bodies of water might lead to a considerable increase in the output of lagoon fisheries in terms of productivity without affecting the balance of the environment.

5. Government Counterpart Support

Providing necessary consultation, information and facilities as required.

- 6. Expert: Consultant in Marine Biology
 - (a) Duty Station: Rome, Italy
 - (b) Qualifications: University degree in biology or related subjects with five years or more of professional experience in fisheries research, preferably including experience in tropical marine ecology
 - (c) Duration: 6 months, plus possibly 3 additional months if required.

OTHER SUB-PROJECTS

The Consultative Committee noted that certain territories had expressed interest in such items as Squid fisheries, Ice-silo operations, the Hawaiian hoop net and mackerel-scad fisheries.

Following brief discussion it was agreed that these and similar possibilities for the development of additional sub-projects might conveniently be held over for consideration at the Second meeting of the Consultative Committee.

OTHER BUSINESS

Information Service. The Consultative Committee requested the Project Manager to arrange for the translation into English or French as required of such publications as the Technical Bulletin No. 1 of the Service de la Pêche, Papeete. The Project Manager was further requested to prepare a list and obtain copies for translation of pertinent publications on a basis of consultation with members concerned.

SPIFDA Stationery. The Consultative Committee requested the Project Manager to have printed an appropriate letter for official use and to provide its members with adequate supplies for use on Agency business.

Letter of Appreciation. The Consultative Committee endorsed the transmittal by the Chairman of a letter of appreciation to Mr R. Jackson, Assistant Director-General, Fisheries Department, FAO, Rome, for making available the valuable services of Mr N. Kojima.

Times and Dates for Subsequent Meetings

Reef & Lagoon Colloquium. The Consultative Committee took note of the dates and timing of several related conferences to take place during August through November. The Committee suggested that suitable dates for the Colloquium on Reefs and Lagoons might be 28 July to 3 August 1971. Such timing would be convenient for participants who would wish to attend the SPC Conference or the Conservation of Nature with special reference to Reefs and Lagoons, 4-16 August 1971, and the succeeding Pacific-Science Congress, Canberra, 16-31 August, 1971.

Time and Place of Second Meeting of the Consultative Committee. The Consultative Committee noted the recommendation from the Fourth SPC Fisheries Technical Meeting, Noumea, 1970, that "the Fifth Technical Meeting on Fisheries be held, in conjunction with the South Pacific Islands Fisheries Development Agency Consultative Committee Meeting, in Tahiti during late 1971."

Noting also the requirement in the Plan of Operation of the South Pacific Islands Fisheries Development Agency that "intervals between meetingsshall not exceed twelve months" (para 6.2, p.33), the meeting requested the Project Manager in consultation with SPC to take appropriate action.

Presentation of the Report. The Consultative Committee requested the Project Manager to expedite the preparation of its Report in mimeographed form for immediate restricted distribution and to seek ways and means to ensure that the Report in its final form should be properly presented on good quality paper, with a suitable cover and binding.

Closing Ceremony. The Chairman made a brief address expressing his appreciation to the members for their work and for the constructional appreach made to the problems presented to them.

He also expressed on behalf of the Committee sincere appreciation for the work of the Secretariat and Interpretation and Translation Service which had assured the success of the First Meeting.

Mr W. Travis, Western Samoa, moved a vote of thanks to the Chairman and this was carried with acclamation.

The Meeting formally closed at 1700 hours on 4th November 1970.

SECRETARY-GENERAL'S SPEECH AT OPENING OF FISHERIES CONSULTATIVE COMMITTEE MEETING

Noumea, 30 October, 1970

Gentlemen:

This morning we are meeting with different hats. You are now attending the first Meeting of the Fisheries Consultative Committee established under the Plan of Operation for the South Pacific Islands Fisheries Development Agency.

As you know it was our intention that this Meeting should have taken place in April last, but at that time there were insufficient representatives of territories nominated to make it worth while, so we decided to hold it following the Fisheries Technical Meeting.

The delay has been unfortunate from the viewpoint of getting started on the work for which the Agency has been established; but on the other hand you have had the benefit of the discussions over the past week which, I am sure, will enable you to contribute more to the questions which will now come before you. SPIFDA is a project which is substantially financed by the United Nations Development Programme, and in common with all such projects it is necessary to work under the rules for such projects prescribed in the <u>Plan of Operation</u> which has been approved and signed by the member Governments concerned.

The Fisheries Consultative Committee is one of the bodies for which provision is made in the Plan of Operation to ensure that SPIFDA meets the needs of the Pacific Island territories. Although this Consultative Committee is advisory in nature, I think you can be assured that its advice will be received by the Project Manager, by FAO and by UNDP with the greatest attention and respect. The other important measure provided for the protection of island interests is the appointment of the SPC Fisheries Officer as Co-Project Manager.

I have heard some criticism that this Agency is not under the management of the South Pacific Commission. I myself would, I think, have preferred this arrangement, but my understanding is that for this project such an arrangement was not acceptable to UNDP, and the Plan of Operation approved by governments provides for control to be exercised by FAO (with SPC as the Co-operating Agency). So we have the Project, and through the Project we have resources in money and skills which otherwise may have been impossible to obtain.

It is for us to see that we obtain the greatest possible value from these resources. This, I think, is the most important advice we need from you. Over the past few months some initial steps have been taken to initiate a Programme of Work drawn up by the Project Manager following enquiries made in Pacific territories, and

with the concurrence of the Commission, FAO and UNDP. In consequence consultants have been recruited to undertake certain work which was asked for by a number of territories.

You may not be in full agreement with all of these steps. If you are not then we would expect you to say so. If we had met in April it would have been possible to avoid this situation, but at that time many of the territories were not agreeable to your attending the Meeting, and we felt it was necessary to have as wide a representation as possible at this important first Neeting.

The Plan of Operation provides that meetings of the Consultative Committee shall be held at least once in each year. We would like to have more frequent meetings, but in the Pacific the cost of such meetings is very high, so I think we must limit ourselves to meetings once each year. Provided the United States law is changed to permit it, participating governments have agreed to an 8% increase in the SPC Budget next year. If this money is received, provision is made for the Commission to meet half the cost of fares for territorial delegates to the next meeting of this Committee. I sincerely hope that this money will become available, as I am sure it will make it easier for you to attend the next meeting.

I now have very much pleasure in declaring this first meeting of the Fisheries Consultative Committee open.

ADDRESS BY CHAIRMAN AT THE FIRST MEETING OF THE FISHERIES CONSULTATIVE COMPUTTEE MEETING

Noumea, 30 October, 1970

Mr Secretary-General - I thank you for your vote of confidence and I assure you that I'll do the best I can to see that this organization does the best possible job for the governments of the SPC during the coming year.

I accepted this nomination with considerable concern - concern for the responsibilities of the position - for the difficulties of being effective while working so far from the headquarters of SPIFDA and concern for the need of insuring greater participation from the other government participants if SPIFDA is to prove successful.

We are all aware that there has been a considerable amount of concern expressed over the operation of SPIFDA to date and the way this Committee has been organized. Prior to this meeting we government representatives have effected what we feel will be a remedy to these past difficulties and will insure a greater degree of participation on the behalf of all of us here today on matters of vital concern to us all.

Basically, what we all <u>want</u> to do is to work together, to be able to consult with each other and to recommend to the funding agencies, the project directors, and the specialists working on projects, how we feel such work can best be accomplished in our respective territories. We also want to recommend new projects which we feel will benefit our territories and to advise on the type of specialist experience has shown us can best carry out the functions of the position.

By effecting a closer working relationship between ourselves, the Project Managers and the Funding Agencies, we feel confident we can help to make SPIFDA the success we all want it to be - for, its success is <u>vital</u> to the successful development of the economy and well-being of our respective islands.

If during the coming year we can demonstrate beyond any shadow of a doubt that SPIFDA has been successful in dealing with the problems of developing the marine resources of the Pacific, I feel certain we can look forward to many more years of continuing aid from the funding agencies. Fail — and we lose a precious opportunity which is not likely to come our way again — so, I propose we now enter into this meeting with an open mind and a feeling of togetherness. If, like a successful football team, we work together throwing our weight and our efforts into a coordinated drive toward our goal — we will succeed. However, a team effort is essential as some of us will have to give while others get, but in the long run we will all win — so, Gentlemen — it becomes rather obvious that what occurs from now on will very largely depend on what we decide and recommend during the next few days. I am confident we will exit smiling and pleased with what we accomplish here.

ANNEX III

AGENDA

Friday. 30 October 1970			
0900	Opening Session		
1000	A Proposal for the Reorganization of the Terms of $R_{\mbox{\scriptsize efference}}$ of the Fisheries Consultative Committee		
1130 - 1300	Lunch		
1300	Report of the Project Manager		
1400 - 1630	Comments on the Report of the Project Manager		
Monday, 2 November 1970			
0830 - 1130	Review of overall program of SPIFDA including Budget Review		
1130 - 1300	Lunch		
1300 - 1630	Review of SPIFDA Projects & Counterpart Provision		
Tuesday. 3 November 1970			
0830 - 1130	Review of SPIFDA Projects & Counterpart Provision and determination of priorities		
1130 - 1300	Lunch		
1300 - 1630	Recommendations of Fisheries Consultative Committee to FAO/UNDP/SPC and the Chairman of the Consultative Committee		
Wednesday, 4 November 1970			
0830 - 1130	Meeting on Oysters in M. Eude's Office		
	Translation of Recommendations		
1300 - 1630	Adoption of Report and Adjournment		

DEVELOPMENT OF MARINE AND BRACKISH-WATER AQUACULTURE

Background and Justification

The steadily increasing population of the territories and on the larger islands the growing urbanization are placing greater and greater strains on the locally available edible aquatic resources. In some territories these resources are already showing, at least in part, signs of serious depletion.

On the larger islands and certain of the atolls and lagoons there appear to be opportunities for the culture of edible oysters, some clams, mother-of-pearl shell, shrimp, mullet and milkfish. In addition, some of the Teuthids, carangids and other schooling fishes are worthy of investigation.

It is most likely that moves toward the development of aquaculture of fishes will be initiated by the capture of fry or juveniles and their rearing in ponds or other enclosures, the operators graduating to the more sophisticated systems of controlled breeding of the stock as their experience and training develops.

Objectives

Recognizing the need for increasing and diversifying employment opportunities and providing supplies of fresh fish or shellfish for local consumption or for export, the objectives of this project will be to recommend methods for aquaculture and to initiate programmes of test plantings of selected species in representative areas in cooperation with territorial fisheries personnel.

Work plan and schedule

During the first half of 1971 the consultants will visit those territories which appear to present the best potential or have the greatest need for development of aquaculture and in cooperation with territorial fisheries personnel will recommend certain areas and species for detailed study.

Work will be concentrated in the minimum number of locations needed to provide representative habitats in order that adequate effort can be applied to obtain meaningful results during the limited time available for this phase of the programme. Although the duration of the assignment of consultants is six months, it may be desirable to schedule subsequent work periods to provide for follow-up studies and analysis of results of test planting programmes.

Government Counterpart support

Pilot scale projects involving test plantings of selected species will be initiated during the first half of 1971, but may require a year or

more to complete. Therefore it is essential that territorial fisheries personnel participate in establishing pilot scale projects and provide personnel and logistic support for periodic monitoring and in some cases for analysis of results.

Experts: Fish and Mollusc Culture Consultants (2)

- a) Duty Station: initially Noumea, New Caledonia
- b) Qualifications: University degree in Biology with five or more years of experience in the culture of aquatic organisms including molluscs and crustacea, preferably in brackish and/or salt water
- c) Duration: 6 months each initially.

In addition it is understood that a specialist in Mother-of-pearl shell culture is now employed in French Polynesia. It is recommended that this specialist be employed as a consultant for up to 3 months if he can be made available for this assignment.

Areas of Interest

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 Japanese little neck or 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. Also interested in culture of estuarine fish and the fresh water prawn, Macrobrachium.

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.

<u>Fiji</u> - 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 the calendar year 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 (<u>Crassostrea commercialis</u>), Hawaii (<u>C. virginica</u>) and Japan (<u>C. gigas</u>) 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. Cultivation of the prawn <u>Macrobrachium</u> is also a possibility and basic pond facilities are available for this work.

Have mullet stocks which may provide a basis for aquaculture.

Have mother of pearl shells, <u>Pinctada margaretifera</u>, 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. Basic laboratory facilities are presently available and these will be further developed by the end of 1970 or early 1971.

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 (<u>C. gigas</u>) received through cooperation of Dr Takeo Imai and are considering the possibility of establishing a hatchery to produce seed.

The CNEXO project in French Polynesia will concentrate on shrimp culture initially using <u>Macrobrachium</u> which is present throughout the South Pacific Islands and later the Japanese prawn <u>Penaeus japonicus</u>. Pr Doumenge suggested that the applied programme of CNEXO 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 ir 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 and in culture of edible cysters 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 several years ago but project failed to develop. 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.

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

Consultant time: None at this time.

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

Consultant time: None at this time.

<u>British Solomon Islands Protectorate</u> - 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 <u>Pictada margaretifera</u> 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 (<u>Siganidae</u>). 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.

ANNEX V

BECHE-DE-MER INDUSTRY DEVELOPMENT

Background and Justification

Correspondence, verbatim report and advertisements in trade journals indicate a strong and increasing demand for Bêche-de-Mer (Trepang), particularly through the oriental markets of Singapore, Hong Kong and Taipei.

Considerable resources are known to exist in some areas of the Pacific but their exploitation since the war has been sporadic and poorly organised and the present island fishermen frequently lack the necessary knowledge to efficiently exploit this resource to meet modern market requirements.

However, the exploitation of this resource can provide an avenue of commercial development in those areas where lack of refrigeration and poor communications prevent the development of other forms of commercial fishing and where few opportunities for alternative commercial development exist.

There is however no suitable definitive guide relating to identification of species, processing, markets and particular market requirements.

Objectives

To assemble material for a definitive illustrated Handbook on the commercially utilizable species of holothurians of the South West Pacific, the Handbook to include coloured illustrations of the organism in situ, illustrations of the dried product, brief description of natural habitat and detailed instructions for the collecting, processing and packaging and marketing of the final product, and a glossary of scientific and vernacular names.

Work Plan and Schedule

The Project might employ a two-man team, one diver/processor and a team leader with experience in diving, economics, and marine biology. The team would work in Papua/New Guinea and the Trust Territory and concentrate their efforts on preparing a handbook which will identify the commercially important species by underwater photographs and detailed descriptions describing habitat etc.; describing in detail with a series of photographs the method of cleaning, cooking, drying and packaging the various species of commercial importance; listing markets and approximate prices for the species of commercial importance; providing shipping instructions from various Pacific centres to the primary markets.

Prior to the actual field work, the team leader should conduct an investigation of the market potential by utilizing the services of market research consultants and by personal investigations. Recommendations of the team leader on the hiring of a diver/ processor should also be taken into consideration by appropriate authorities inasmuch as the two men will be working closely together.

The Handbook's text should initially be printed in English and French and the original photographs, plates and text then circulated to those territories wishing to prepare special language editions.

Government Counterpart Support

The Governments of the Trust Territory and TPNG have expressed considerable interest in developing an export trade in Bêche-de-Mer. All have sea-going facilities and would be able to assign or recruit island personnel to assist in field work.

Experts (i) Consultant Marine Biologist (ii) Consultant Processing Technologist

- a) Duty Station: initially Noumea, New Caledonia
- b) Desirable qualifications (i) University degree in Biology or related subjects with two or more years of professional experience in marine invertebrate biology, desirably concentrated on the holothuria with experience in underwater fishing, photography and general marketing

(ii) Extensive experience in the collection, preparation, processing, packaging and transport of Bêche-de-Mer (Trepang) and knowledge of the marketing requirements

c) Duration: (i) Consultant Marine Biologist - 6 months

(ii) Consultant Processing Technologist - 6 months

Travel schedule to be divided between TTPI, TPNG, Hong Kong,
Taipei, Singapore.

CRAYFISH (SPINY LOBSTER) CONSERVATION

Background and Justification

The highly localized fisheries, almost invariably by spear or hand for Crayfish (Fam: Palinuridae) have over the past decade attracted considerable interest as sources for luxury export industries and there is need for much greater knowledge of the resources, their availability and production, and rates of replacement than is currently available.

Evidence presently available, almost entirely from verbal reports suggests that these stocks are highly vulnerable and have low replacement rates.

Moreover, the existing fisheries in almost all cases noted operate without regulatory controls, resulting in the offtake of juveniles and berried females.

More than a dozen separate species of palinurids occur and are exploited to a greater or lesser extent in the South Pacific.

Probably the main factor limiting exploitation, at least for overseas markets, is the lack of regular ship and air communication between the outlying and (?) more productive islands and atolls, coupled with the almost complete lack of refrigeration facilities.

On a basis of present knowledge, and with the outstanding exception of the Gulf of Papua it appears that the primary need is for scientific regulation of the fishery, specifically the protection of the juveniles (and possibly their cultivation) and the egg-bearing females.

Objectives

To prepare a preliminary review of the existing fisheries for reef or spiny lobster (crayfish) in selected territories of the south and south west Pacific, including identification of the species concerned and compilation of available knowledge of the behaviour of and method of fishing for these organisms; to indicate areas where further study and research is desirable (particularly with reference to increasing the resource through artificial shelters and by nursery or post-larval stages) and to prepare preliminary proposals for the rational management of the available stocks.

Work Plan and Schedule

The consultant would visit selected territories, especially Tonga, British Solomon Islands Protectorate, American Samoa, Fiji, Guam, U.S. Trust Territory and Papua and New Guinea, each for periods of 2-3 weeks, possibly longer in Papua and New Guinea, where he would work closely with and advise, the Department of Agriculture, Stock and Fisheries on the current research studies.

have seriously affected this site which, due to its remoteness. is difficult to control or manage. It was felt that Palmerston might well become a prime turtle egg supply source for hatcheries located elsewhere if the logistic problems can be solved. An expert was required to conduct an accurate survey and evaluation of the potential of Palmerston.

(8) Trust Territory of the Pacific Islands The Trust Territory had a viable Hawksbill
Turtle Project at Palau where hatchlings were
housed and fed on fish scraps until they were
six or seven months old after which they were
liberated at selected points. Some three thousand
Hawksbill were raised in this way prior to closure
of the project in 1969 due to financial considerations. The Trust Territory possesses good potential
for turtle-rearing and are very interested in this
project. They require a consultant on Marine Turtles
to conduct an overall survey and to advise on
eventual Turtle management.

(9) Western Samoa

Following surveys of a declining Green Turtle population earlier this year, the Fisheries Division has commenced a project aimed at building-up current turtle stocks and eventually furnishing other territories with hatchlings for their own restocking. A hatchery is already operating, adjacent to the remaining nesting-sites; suitable buildings and accommodation have been acquired; legislation has been prepared and the services of a full-time Peace Corps worker, as a Marine Biologist to manage the hatchery has been promised as from January 1st 1971. In addition, Dr Hirth, the SPIFDA Consultant on marine turtles, has spent ten days on site and has initiated a turtle-tagging programme - the first in the South Pacific. Western Samoa is vitally interested in the successful establishment of this Green Turtle hatchery and was willing to act as a 'Centre' for the purpose of restocking other territories and in assisting them with basic research problems. Western Samoa is very interested in obtaining the services of the consultant for some months in 1971 and also in acquiring funds to enable turtle-eggs to be collected from other territories (e.g. Palmerston Atoll & Surprise Island) to provide rapid build-up of hatchling stocks within the region.

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Evidence presently available, almost entirely from verbal reports suggests that these stocks are highly vulnerable and have low replacement rates.

Moreover, the existing fisheries in almost all cases noted operate without regulatory controls, resulting in the offtake of juveniles and berried females.

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Probably the main factor limiting exploitation, at least for overseas markets, is the lack of regular ship and air communication between the outlying and (?) more productive islands and atolls, coupled with the almost complete lack of refrigeration facilities.

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Work Plan and Schedule

The consultant would visit selected territories, especially Tonga, British Solomon Islands Protectorate, American Samoa, Fiji, Guam, U.S. Trust Territory and Papua and New Guinea, each for periods of 2-3 weeks, possibly longer in Papua and New Guinea, where he would work closely with and advise, the Department of Agriculture, Stock and Fisheries on the current research studies.

Government Counterpart Support

The Governments of the Territories listed above have expressed interest in developing crayfish export industries but are already concerned over the possibility of stock depletion. All have seagoing facilities and would be able to assign or recruit personnel to assist the consultant.

Expert : Consultant Marine Biologist

- a) Duty Station: Noumea, New Caledonia
- b) Qualifications: University degree in Biology or related subjects with five years or more of professional experience in marine biological research, preferably on the Crustacea.
- c) Duration: 6 months

ANNEX VII

TURTLE CONSERVATION AND MANAGEMENT

A general discussion on this project resulted in the respective territories summarising their views as follows:

(1) American Samoa

Few marine turtles are present upon the main island. Offshore Rose Atoll seems to afford Hawksbill & Green Turtle an excellent nesting site but there could be no 'farming' of turtles there due to its classification as a total Reserve. Best hopes for increasing main island turtle stocks seem to be through co-operation with Western Samoa.

(2) Fiji

This Territory was conscious of the dangers of over-exploitation of the natural turtle-stocks. Leather-back, Green & Hawksbill turtle were all present in varying numbers. Legislation was already in force to protect dwindling stocks, mainly through a closed season, and limitations on size, a total prohibition on the collection of eggs. Other measures include a prohibition on the export of turtle shell, and quota limits on exported shell ornaments.

(3) Gilbert and Ellice Islands Colony As far as is known, at present, only one atoll within the groups has a turtle population of any significant size. No regulations exist for their protection. There are no immediate plans for turtle farming or controlled management.

(4) French Polynesia

Several localities within the area possess reasonable stocks of Green Turtle, in particular the atoll of Mopelia in the Leeward Group. French Polynesia is very interested in restocking but has need of a marine turtle consultant to conduct a survey lasting several months.

(5) New Caledonia

Limited information exists on turtle stocks. Turtles were used for the tourist trade and not for food. There seemed no possibility of conducting turtle farming though Surprise Islet provides a good nesting-site. Interest in marine turtles is confined to possible re-stocking.

(6) Territory of Papua & New Guinea Limited information exists on turtle stocks. Turtle fishing is confined to subsistence level exploitation and there are no indications of decreasing numbers. No immediate turtle programme is envisaged.

(7) Cook Islands

Considerable stocks of marine turtles are known to exist at Palmerston Atoll, a large and excellent nesting area. However, human and other predators

have seriously affected this site which, due to its remoteness. is difficult to control or manage. It was felt that Palmerston might well become a prime turtle egg supply source for hatcheries located elsewhere if the logistic problems can be solved. An expert was required to conduct an accurate survey and evaluation of the potential of Palmerston.

(8) Trust Territory of the Pacific Islands The Trust Territory had a viable Hawksbill Turtle Project at Palau where hatchlings were housed and fed on fish scraps until they were six or seven months old after which they were liberated at selected points. Some three thousand Hawksbill were raised in this way prior to closure of the project in 1969 due to financial considerations. The Trust Territory possesses good potential for turtle-rearing and are very interested in this project. They require a consultant on Marine Turtles to conduct an overall survey and to advise on eventual Turtle management.

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Following surveys of a declining Green Turtle population earlier this year, the Fisheries Division has commenced a project aimed at building-up current turtle stocks and eventually furnishing other territories with hatchlings for their own restocking. A hatchery is already operating, adjacent to the remaining nesting-sites; suitable buildings and accommodation have been acquired; legislation has been prepared and the services of a full-time Peace Corps worker, as a Marine Biologist to manage the hatchery has been promised as from January 1st 1971. In addition, Dr Hirth, the SPIFDA Consultant on marine turtles, has spent ten days on site and has initiated a turtle-tagging programme - the first in the South Pacific. Western Samoa is vitally interested in the successful establishment of this Green Turtle hatchery and was willing to act as a 'Centre' for the purpose of restocking other territories and in assisting them with basic research problems. Western Samoa is very interested in obtaining the services of the consultant for some months in 1971 and also in acquiring funds to enable turtle-eggs to be collected from other territories (e.g. Palmerston Atoll & Surprise Island) to provide rapid build-up of hatchling stocks within the region.