

SOUTH PACIFIC COMMISSION

EIGHTH REGIONAL TECHNICAL MEETING ON FISHERIES  
(Noumea, New Caledonia, 20 - 24 October 1975)

DIPLOMA IN TROPICAL FISHERIES

By

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SUMMARY

In 1971-72 a survey on Fisheries Training needs in the South Pacific was sponsored by the Canadian International Development Agency (CIDA) and undertaken by Dr C.C. Lindsey of the University of Manitoba. He defined the need for a wide spectrum of fisheries training. The first step was the setting up, in conjunction with the University of the South Pacific, a degree and a diploma course together with in-service training throughout the region.

The Diploma Course in Tropical Fisheries is to provide training for middle level positions in government services and to a lesser extent in industry. The Diplomates receive training in four broad areas, viz. biology; navigation and engineering; practical aspects of fishing; economic and social fields. The course is a two year one and entrance to it may be gained by New Zealand University Entrance Examination or equivalent or a pass in the Preliminary 1(science) program of the University or at the discretion of the Senate for older students with fisheries experience. The course is designed to be flexible and at present eighteen subjects are taught. Stress is laid on the practical aspects of fishing and fisheries.

In addition to equipment CIDA has provided funds for a Director of Fisheries Training and two University instructors. Also provision is made for short-term instructors. The Fiji Government, UK Overseas Development Aid and FAO all assist in provision of some training. The class of 1973 had 8 students and the class of 1974 had 12. The course is geared for the training of up to 20 students.

CIDA is offering scholarships and in 1976 10 scholarships will be offered throughout the region.

Comments and suggestions for the running and improvement of the course and a description of the fisheries training needs for all countries and territories are invited from the meeting.

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1. In 1971-72, Dr. C.C. Lindsey (University of Manitoba, Winnipeg, Manitoba, Canada) undertook an extensive study of the state of fisheries development and the training needs of personnel in fisheries in the South Pacific region. The survey was sponsored by the Canadian Government through CIDA (Canadian International Development Agency). Dr Lindsey submitted a report of his findings to the University of the South Pacific and CIDA in December 1972:- the report was entitled "Fisheries Training in the Region Served by the University of the South Pacific".
2. Dr. Lindsey pointed out that rapid expansion was occurring in fisheries of the South Pacific, due partly to the upgrading of subsistence fisheries to commercial fisheries and also to the development of large-scale skipjack fisheries. Government authorities recognized that fisheries were not likely to become the dominant industry in most territories but fisheries were important to the national economies since they provided employment, furnished import substitutions, brought in foreign currency and combated protein deficiency. However, government officials realized that if fisheries were to reach their full potential it was necessary to provide more education and extension services in order for technical innovation to be effective. A wide spectrum of fisheries training was needed ranging from postgraduate work through degrees and diplomas to in-service training modules, specialist seminars, and fishermen schools. In his report, Dr. Lindsey included a proposal for fisheries training for the South Pacific region at the degree and diploma levels as well as for in-service upgrading of existing personnel. Stress was placed on the necessity for training throughout the South Pacific region, not for just one particular country.
3. The report was accepted favourably by all parties and based on it the Canadian Government through CIDA agreed to sponsor a fisheries training program for both government and industry in the countries of the South Pacific region. The program was to be sponsored through the University of the South Pacific and a Memorandum of Understanding was signed between the University and CIDA on August 23, 1974.

4. To date virtually all effort in this program has been devoted to training at the diploma level and it is mainly the Diploma in Tropical Fisheries that will be described and discussed in the remainder of this report.

#### Purpose

5. The object of the Diploma in Tropical Fisheries is to contribute to the development of fisheries in the South Pacific region by providing training for students to enable them to occupy middle level positions in government fisheries departments and to a lesser extent in industry. It is a course for students from the South Pacific region and it is envisaged that diplomates could occupy a variety of positions such as:- fishery extension officers, man government or exploratory vessels in various capacities, serve as research or laboratory assistants, monitor fishing operations, assist in marketing or processing operations. Training is provided in four broad areas:- biological; navigation and engineering; practical aspects of fishing; and economic and social fields. It is important that diplomates take courses in all four areas since effective co-operation between government officers in different areas of specialization requires some understanding of each other's aims and methods. Further students ostensibly destined for one type of specialized government service are frequently shifted to another and hence versatility is an asset.

#### Eligibility

6. The Diploma in Tropical Fisheries is a two year course and is open to students from the region encompassed by the University of the South Pacific. Entrance into the Diploma 1 year may be gained by students who have passed the New Zealand University Entrance Examination (or equivalent examination standard) which has included passes in courses in English and Biology, or to students who complete and pass the Preliminary 1 (Science) program of the University. In special cases students without the above qualifications may be admitted into the Diploma 1 year at the discretion of the Senate of the University if they are older mature students and if they have been employed in fisheries work and will return to it on graduation.

#### Curriculum

7. In his report, Dr. Lindsey pointed out that a wide spectrum of training in fisheries was needed in a course such as the Diploma in Tropical Fisheries. Furthermore no one institution in the region was equipped to offer this range of training nor would the volume of students required justify establishment of a separate institution. However, there were institutions already in existence which could collectively offer such training. A Diploma in Tropical Fisheries taught jointly by more than one organization, and regional in nature had the additional advantage in that it could attract overseas assistance in staffing to the benefit of all parties. Portions of this training might further be made available for in-service upgrading of employees in Fishery Departments of the region, answering a serious need and perhaps permitting stronger in-service offerings than individual Departments of Fisheries themselves could provide.

8. The Diploma in Tropical Fisheries is administered by the University of the South Pacific and four institutions take part in the instruction:- the University of the South Pacific; the Fiji College of Agriculture; the Derrick Technical Institute; and the Fisheries Division of the Fiji Ministry of Agriculture, Fisheries and Forests.

9. In the initial year, when most students are taking the Preliminary 1 year, accommodation is at either the University or the Fiji College of Agriculture. In the Diploma 1 and 2 years, students are accommodated at the Fiji College of Agriculture.

10. The Diploma in Tropical Fisheries was designed to be flexible and cover as wide a subject matter in fisheries as possible. At the present time eighteen subjects are taught during the two years and they are:- invertebrate zoology, ichthyology, fisheries biology, oceanography and marine ecology, economics, keeping records, public speaking, human nutrition, extension work, navigation and pilotage, seamanship and safety, engineering knowledge, engineering drawing, practical fishing, fishing gear, practical navigation and small boat handling, aquaculture, and fisheries management. In addition training in swimming and drown-proofing is given and SCUBA training is provided to those who wish it.

11. Throughout the course stress is laid on the practical aspects of fishing and fisheries. In the biology segment of the course, in addition to broad surveys of the invertebrates and fishes, emphasis is placed on identification of the common animals of the region, particularly those of commercial importance or potential importance. Instruction in the social and economic fields points out the importance of economics in fisheries and methods to determine whether a fishery or potential fishery is economically viable. Demonstrations of extension work and the importance of communicating ideas to fishermen and the public are given. Knowledge gained in courses in navigation and pilotage, and engineering are put to practical use in courses in practical fishing and gear technology where students become familiar with the many aspects of fishing.

### Staffing

12. As indicated previously the Course is sponsored by CIDA through the University of the South Pacific. CIDA has provided funds to purchase a training vessel, a smaller teaching and research boat, and to purchase equipment and cover other necessary expenditures of the Course. CIDA has also provided funds to hire from Canada a Director of Fisheries Training and two University instructors to teach the biological part of the Course. Funds have also been provided for short-term instructors for the Course. All these people have affiliate appointments to the School of Natural Resources of the University of the South Pacific.

13. Instruction at the Fiji College of Agriculture and the Derrick Technical Institute is provided by existing staff and paid for by the Fiji Government. Instruction at the Division of Fisheries of the Fiji Ministry of Agriculture, Fisheries and Forests is provided partly by existing staff, by instructors from the U.K. Overseas Development Aid, and from the United States Peace Corps. Fisheries boats used during the training are provided by the Fisheries Division of the Fiji Ministry of Agriculture, Fisheries and Forests. Use is also made of aquaculture facilities funded by FAO.

Progress to Date

14. The first class of eight students, all from Fiji, enrolled in the Course in 1973 and all took the Preliminary 1 year at the University. These students are expected to graduate in November of this year and the Fisheries Division of the Fiji Ministry of Agriculture, Fisheries and Forests has indicated they have found suitable placement for them in their Division for the repayment period of their bond.

15. The second class of 12 students, 11 from Fiji and one from Tonga, enrolled in 1974 and again all took the Preliminary 1 year at the University. These 12 students are now completing their Diploma 1 year.

16. The number of students who will enter the Diploma 1 year in 1976 is presently unknown. Hopefully because of wider publicity and the scholarships being offered, it is hoped that more enrollment will occur from other areas in the region. Ideally we would like to have 15-20 students in each year and about half of them from other areas in the region.

17. The course has gone through some initial "teething problems" as one might expect with any new course. These problems were compounded in the Diploma Course because four institutions are involved in the instruction. Further a full-time Director of Fisheries Training to handle the administrative duties was not appointed until I arrived in Fiji in June of 1975. In the interim, Dr. H.J. Squires had served in this post in addition to his duties as Chief Fisheries Officer for the Division of Fisheries of the Fiji Ministry of Agriculture, Fisheries and Forests. With my appointment there is now someone to devote full time to the administrative duties of the post and solve the many problems that arise in the Course. A Board of Studies and a Board of Assessors has been set up and meets regularly. The curriculum has been agreed upon, submitted to the University's Senate and Academic Committee, and has been approved. Other problems such as purchase of the training vessel, purchase of equipment, transportation problems have been largely solved and the Course is now running in a smooth and efficient manner. It is felt that most of the teething problems are now behind us and in future more time will be spent on further improving the Course.

Scholarships

18. As mentioned above the Diploma in Tropical Fisheries Course was designed to serve the needs of the South Pacific region and a fundamental objective of the Course is to obtain maximum regional participation. To encourage students to enroll in the Course, particularly those from the region, CIDA is offering scholarships to enable them to enroll in the course. In 1976 ten scholarships will be offered and will be distributed throughout the region. Each scholarship will have a value of \$2200.00 Canadian (about \$1800.00 Fijian). The registrar will shortly or has already advised Departments of Education in the region about the Course and these scholarships and hopefully this information will be passed along to those people involved in fisheries work. We look forward to increased regional participation in the Course in 1976.

### Future

19. Now that the Diploma in Tropical Fisheries Course is a reality and most of the initial teething problems overcome, we are beginning to think of future developments. Certainly as experience is gained we will expect to make improvements in the Course. At the present time in addition to improving administrative procedures we are closely examining the curriculum to ascertain if we can improve the Course.

20. Of immediate concern is to create more interest in this Course in all countries of the region and I have indicated some ways we are doing this. The possibility of students taking some of their training in their own countries and obtaining credit for it is being examined. We want to maximize regional participation in the Course and we are examining all ways to achieve this aim.

21. However, if we are to improve the Course and answer the training needs of the countries in the region it is essential that we obtain comments from the various Departments of Fisheries and people interested in fisheries training. We welcome your criticisms, thoughts and ideas. To facilitate the flow of communication I am soliciting comments from any and all at this Conference. Further I hope to visit most of the countries in the region and discuss the Course with all individuals interested in fisheries and fisheries training.

22. Finally we have not forgotten that in his report Dr Lindsey envisaged fisheries training not only at the Diploma level but also at the degree and postgraduate levels, as well as in-service training of existing fisheries personnel. We are hopeful that some degree of co-operation can be worked out between the Diploma Course and in-service training courses that might be offered by various Departments of Fisheries. One area where co-operation might occur is in the use of short-term experts funded by CIDA. These experts could teach partly in the Diploma Course but could assist with in-service training. Further, these specialists could be sent out into the region to offer instruction in their specialities. Another possible area of co-operation is that employees of Departments of Fisheries might be permitted to take particular subjects in the Diploma Course. Although they wouldn't qualify for a Diploma they could be granted a Certificate of Competency in those courses they complete.

23. A need also exists in the region for fisheries training at the degree and postgraduate levels. Under the present arrangement it is doubtful if any cross crediting of courses can be permitted between the Diploma and Degree level. However the Canadian teaching staff of the Diploma Course could be used to teach courses in fisheries at the degree level and they could assist with the training of graduate students. There is a real need for research in order to foster some types of fishery development and training graduate students is one way to promote these studies. Hopefully studies in fisheries at the degree and postgraduate levels can be started in the near future.

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