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SOUTH PACIFIC ISLANDS FISHERIES DEVELOPMENT AGENCY

SECOND FISHERY CONSULTATIVE COMMITTEE MEETING

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CONSULTANT SUMMARY REPORT/HENDRICKSON/TURTLES

Report on Turtles

by

Dr. J.R. Hendrickson

Dr. J.R. Hendrickson was appointed as a consultant for the SPIFDA on 9 June 1971 and concluded his assignment on 8 August 1971. His terms of reference were to inspect and report on the sea turtle farm on Grand Cayman Island, B.W.I., to review stocks of marine turtles in the South Pacific area to supplement the earlier work of Dr. Hirth, and, where feasible, to assist in designing turtle farms and train local personnel. He visited the Trust Territory of the Pacific Islands (TTPI) and Territory of Papua and New Guinea (TPNG). The Grand Cayman Islands were visited a few months prior to his arrival in the South Pacific area.

Turtle culture at the Grand Cayman

A marine turtle farm has been established by Mariculture Ltd. Co. at the Grand Cayman Island. The sea temperature is about 26°-27°C. There are two farm sites - the Salt Creek Farm (older farm) and the Goat Rock Farm (not yet complete). The total investment is around U.S.\$ 2 500 000 and about 25 people are employed. The company is 5 years old and has about 4 400 turtles of various ages in both the farms. The turtle culture farm is still a debit operation and likely to remain so for several years. The main feature of the operation is that the animals are heavily crowded (26 kg/100 litres of water) thus effecting space economy. Fresh sea water is constantly circulated. Squid pieces and trout food are fed to hatchlings and baby turtles, followed gradually by the turtle grass. About 70 percent of the cost per kg of turtle is in feed costs. Breeding of turtles in captivity has not yet been successful and, if this cannot be achieved, the entire idea of turtle farming may be unrealistic. At present, eggs are collected from wild nesting beaches and hatched in tanks. It takes at least 3 years for the turtles to achieve marketable size. Large-scale collection of eggs from wild nests may seriously deplete recruitment to the turtle population.

The expert recommends that establishment of a turtle farm of the above type in South Pacific should await progress of the Mariculture Ltd. venture before investing money. Serious consideration should be given to studies on breeding of turtles in captivity.

Recommendations for TTPI and TPNG:

Long-term survey and inventory of turtle resources, including mapping of nesting and feeding areas should be undertaken and such a work programme could be combined with surveys of other marine resources such as fish, shellfish, etc., if practicable. There is a need for revision of regulations in TTPI concerning taking of sea turtles and eggs to include all species of sea turtles. There is no need for such legislation in TPNG at present. In TTPI, establishment of private turtle farms as business investments should be discouraged until the resources are better inventoried, until the farming techniques have been perfected and markets for the product are favourable. In TPNG, however, establishment of small numbers of farms similar to the one started in February 1971 in Darnley Island may be considered. The Darnley Island Farm is an establishment at a cottage industry level and has a hatchery where the eggs are incubated and young turtles are put in pens of bamboo and fish netting in sea water. Chopped fish is fed to them. Experiments may be carried out on hatching and growth of the turtles, feed conversion ratio, etc. In both TTPI and TPNG, selected high nesting density areas should be set aside as permanent reserves. Eggs should not be transported over long distances to places where turtle populations may be genetically different. All supplies of wild eggs to turtle farmers should be under Government supervision.