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DEEP BOTTOM FISHING IN FRENCH POLYNESIA

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In French Polynesia, "paru" (as deep-bottom fishes are called locally) were, until 1985, mainly caught by recreational fishermen using modern boats and other expensive equipment like echosounders and electric reels. However subsistence fishing using more modest boats and gear (handlines) and locating the fishing grounds by empirical means, as well as complementary fishing and night fishing account for a good part of the total catch. A fisherman named Faty who started deep-bottom fishing as a side-line alone caught 65% of the total weight landed in 1986.

Fishing efforts and yields are closely linked to weather conditions.

The deep-bottom fish known as "paru" comprise a large number of species, only a few of which have potential as a fishery resource. The most sought-after species are fished intensively, using echosounders to locate fish concentrations.

Several species already appear to be overfished in the Windward Islands. They are E. carbunculus, E. coruscans, A. rutilans and E. septemfasciatus. The criteria, on which the diagnosis of overfishing has been based, vary with the species:

- the small numbers caught; the total or near-total absence of small and medium sizes (E. coruscans, A. rutilans and E. septemfasciatus);
- the very great difference between the maximum size recorded and the mean size, or the mean maximum size, of the catches; the slow rate of growth; the small quantities fished; the high percentage of mature females in the catches (E. carbunculus).

Some abnormalities were observed in all species of Lutjanidae and in P. macrocephalus, where not a single mature male was found. This is something to be concerned about since it suggests elimination of the males through too intensive fishing.

Some species have a higher rate of growth. This is true of P. auricilla and P. argyrogrammicus where mean size of the catches is over half the maximum size recorded. Unfortunately, the stocks of these species are small.

The decrease in size observed in all the species studied over the past two years shows that deep bottom fish stocks are becoming depleted.

Fishing around the Windward Islands has significantly reduced the stock of deep-bottom fishes. Figures for 1987 confirm this decline in production around Tahiti-Moorea, Mehetia, Maiao and Tetiaroa, which is linked to a smaller number of trips and to stock depletion. In the light of the foregoing, the only effective solution would be to let these waters "rest" for about 10 years. Unless this is done, gradual extinction of the stock is inevitable.

As for the other island groups, it seems urgent to draw up and enforce strict legislation if overfishing is to be avoided.

Surveys carried out by scientists in Moruroa (1985) and by the Japanese on some seamounts in the Austral Islands and Marquesas Islands (1987) confirm the low fishery potential of "paru" stocks in French Polynesia as a whole.