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FISHERY-RELATED RESEARCH CARRIED OUT BY THE ORSTOM CENTRE IN NOUMEA
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SUMMARY

The activities of ORSTOM's Noumea Centre in the fisheries field extend to a variety of exploitable or exploited resources.

Bivalves inhabiting soft seabeds in the intertidal zone are easy to gather on foot. Two main species are harvested. Both stocks and maximum sustainable yields (170 mt for the south-western lagoon) have been estimated.

The pectinid bivalves of the lagoon can only be harvested with the help of scuba equipment. Two main species are available. Sustainable yield is estimated at 700 mt of shells (100 mt of edible material). Preliminary larvae breeding trials for a possible aquacultural application have been carried out.

Reef and lagoon fish have been studied in the south-western lagoon of the main island *Grande Terre*, in Ouvea lagoon and in the Chesterfield Islands through fishing experiments with bottom longlines, handlines, traps, rotenone poisoning and underwater visual censuses conducted by divers. The abundance of the main commercial species has been determined and existing stocks estimated (25 000 to 45 000 mt of reef fish in the south-western lagoon; 17 000 to 30 000 mt of fish capturable by handlining in the south-western lagoon; 9 000 to 12 000 mt of reef fish in Ouvea; 17 000 to 39 000 mt of lagoon fish in Ouvea). Exchanges between reef fish populations, soft-bed populations and inshore populations are low. The influence of the presence of the Noumea urban area on stocks has been demonstrated. A biological database has been compiled, with information on the biology, distribution and ecology of over 400 species.

The role of mangrove areas on the fish populations of the south-western lagoon has been the subject of research. Sampling was performed using gillnets, fyke nets and rotenone poisoning. 266 species straddling 64 families have been identified. Research reveals that the linkages between mangrove and lagoon are limited.

The fish fauna of the soft seabeds was surveyed by bottom trawling. 298 species divided into 72 families have been identified. Population density and biomass are low, being dominated by a low number of small-sized species without any real commercial value.

Five seamounts located in the economic zone of New Caledonia were exploited for 4 years by bottom longliners fishing for species *Beryx splendens* (alfonsino). Fishery statistics, an on-board observer and 11 scientific cruises made it possible to obtain a clear picture of this species' biology and ecology. Biomass and annual MSY have been estimated for the five seamounts. These are thought respectively to be 1800 to 2250 mt and 400 to 470 mt.

A synopsis of results obtained with commercial fishing for deep-bottom species in Vanuatu is in progress, using data acquired over a ten-year period by the village fishery statistics collection network. This study has two major goals: study of the resource itself and research into the socio-economic circumstances which directly influence its exploitation. The various fishing grounds of this island group will be classified in terms of their exploitability.