



Coral used for all building purposes in the Maldives.

The Maldives

by

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64. INTRODUCTION

With a territorial area of 90,000 km² and only about 300 km² dry land (see Figure 46), the Maldives has traditionally exploited the sea. Its tuna fishery has long been the dominant fishery. However, considerable efforts are being made to diversify fisheries activities. As a result, nontraditional fisheries, such as lobster, sea cucumber and giant clam fisheries, have come into being, while the long-existing small-scale reef fishery has expanded.

Income originating from the sea has further increased with the introduction of tourism. Today, tourism is a major source of national income.

Even as the global environment crisis gains momentum, the Maldives too faces its own environmental challenges. Urbanization has deprived the islands of vegetation, and intensive groundwater use in urban centres has impoverished water, making it saline. Harbour construction and land reclamation have disrupted delicate marine ecosystems. And sewage and solid waste dumped into the water, as well as coral- and sand-mining, have further complicated the environmental situation.

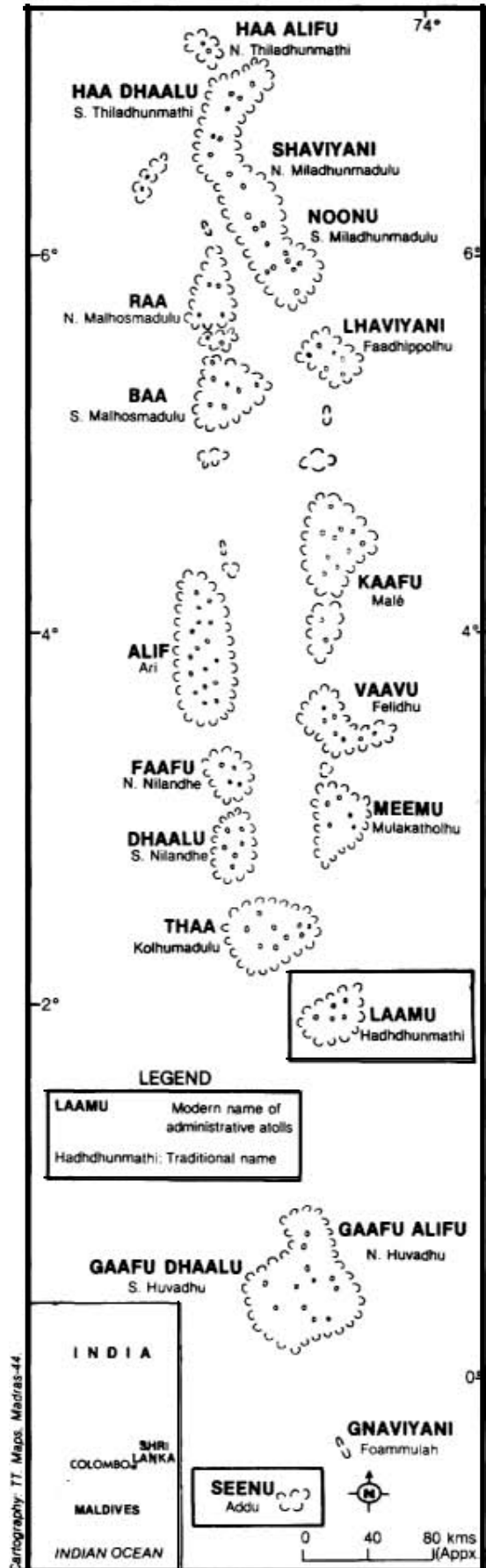
It is obvious that if the Maldives is to regularly reap the maximum benefit from fisheries and tourism, its seas must be kept healthy and unstressed. Rational use of marine resources, without threatening the environment, is clearly the ideal goal. Preventing, or reducing, damage to fish and fishery resources through sounder environmental management will improve the livelihood of the fisherfolk.

When considering various environmental threats affecting fisheries in the Maldives, it should be noted that all these effects are not quantifiable at this stage. Nevertheless, it must be emphasized that most environmental threats affecting fisheries in the Maldives are not due to pollution.

65. THE SURVEY

The Marine Research Section (MRS) of the Ministry of Fisheries and Agriculture (MOFA), with the Environmental Research Unit of the Ministry of Planning and Environment and the Maldives Water and Sanitation Authority, carried out a survey to assess potential environmental threats to marine fisheries in the country. Information was gathered mainly by reviewing existing reports and data, and by

Fig. 46. Map of Maldives showing the sites visited



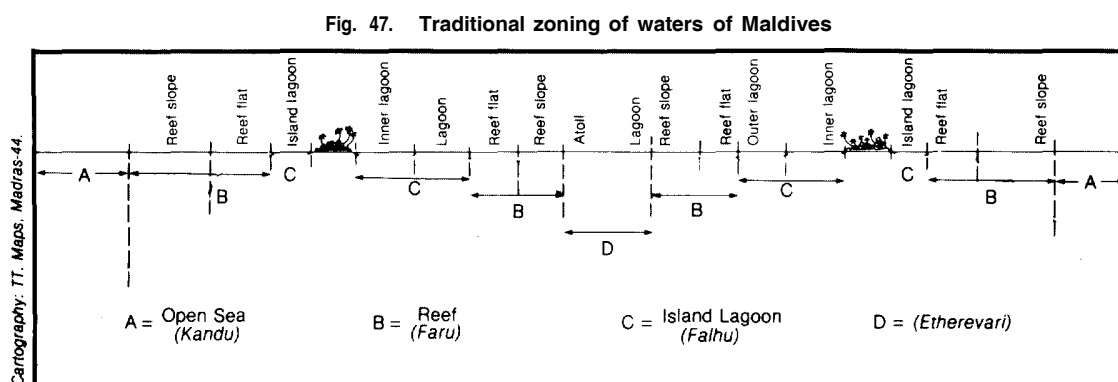
interviewing fishermen and government authorities. In addition, field observations were carried out and water quality tested at some sites. Two field trips were made, one to Seenu Atoll and another to Laamu Atoll (see Figure 46 on p. 239 for site location), both priority areas for development activities.

66. THE MARINE ENVIRONMENT AND EXPLOITATION OF ITS RESOURCES

The Maldives is an archipelago of coral islands stretching between latitudes 041° 48' S and 7° 06' 30' N. More than 98 per cent of Maldivian territory is sea. The scattered coral reefs and 1190 islands depend on the marine environment for their existence.

66.1 Zoning

A typical Maldivian coral island has a sandy lagoon situated in between the island and its house-reef. Beyond the reef stretches the deep atoll lagoon. Between the atolls are deep open seas or channels. Based on these features, Maldivian fishermen traditionally divide the marine environment into sandy lagoon (*Faihu*), reef (*Faru*), atoll lagoon (*Etherevari*) and open sea or channels (*Kandu*) (see Figure 47),



This zoning may be arbitrary from an ecological viewpoint, but it is convenient to use in a survey of this nature. In the first place, all exploited marine resources, living or otherwise that are exploited in the Maldives, can be attributed to these zones. Secondly, the zones also indicate areas which are under varying degrees of anthropogenic influence.

The sandy lagoon and the reef, for instance, being shallower and closer to the islands, are more accessible to the people than the atoll lagoon and open sea. As a result, the living and nonliving resources (*e.g.* fish, corals, sand etc.) of these two zones are more intensively exploited and the zones themselves are modified by activities such as harbour construction, land reclamation and coral and sand mining.

Besides, ecological conditions in these zones are also different. Tidal fluctuations and their consequences, such as change in hydrostatic pressure, can be felt in the sandy lagoon and the shallow reef areas, whereas all these changes have negligible effects in the atoll lagoon and in the open sea.

Flora and fauna, and their relative abundance, in these zones also vary. The sandy lagoon is inhabited by burrowing organisms that can withstand tidal fluctuations and sand displacements. The abundance of organisms is high, though the number of species is low. In some sandy lagoons, however, the dominant seaweeds and seagrasses grow so abundantly that they invade the adjacent shallow coral reef areas.

Reef life is very diversified. The reef is rich in species and number of organisms. Fish, lobsters, sea cucumbers, giant clams and many other organisms find their home in the reef, while the reef corals themselves are very diversified.

The atoll lagoon and open sea are zones with diversified species.