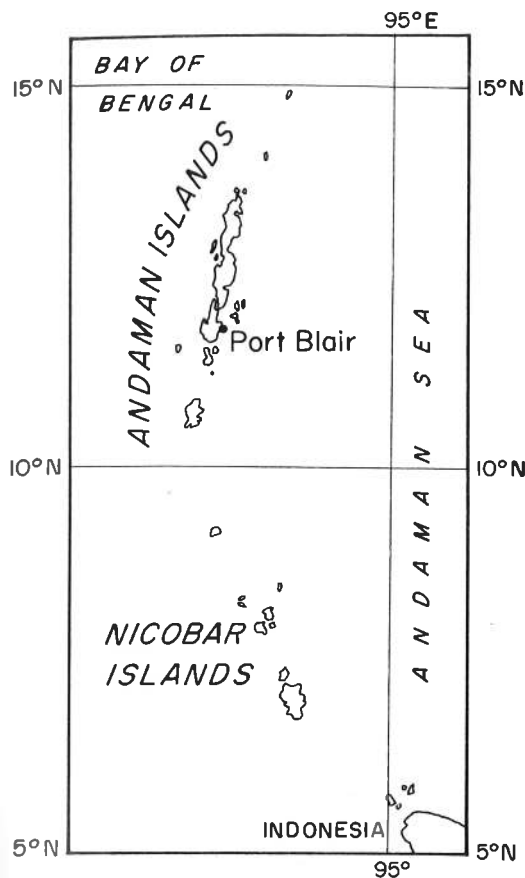


Fisheries of the Andaman and Nicobar Islands

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Andaman and Nicobar Islands, India



A filamentous stretch of 585 islands, islets and rocks in the northeast Indian Ocean, occupying an area of 8,293 km², the Union Territory of Andaman and Nicobar Islands has a coastline of 1,500 km and a continental shelf area of some 35,000 km². The shelf is narrow, 3-8 km wide, and fairly steep, with many fringing reefs in the east and barrier reefs on western side harboring rich populations of corals and molluscs. The Union has sovereign rights to a sea area of nearly 600,000 km², from which a substantial harvest of fish can be taken annually. The waters are warm but nutrient poor (see box).

Oceanographic features

surface temperature	27-28.5°C
surface salinity	31.2-32.15‰
surface currents	2% wind velocity
nutrients	nitrate-N and phosphate-P negligible near the coast, limiting productivity

Major Developments

The first fisheries regulations were laid down in 1938. However, a Fisheries

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Research Unit was not set up until 1949, at Port Blair. This unit was renamed the Fisheries Development Unit in 1955 and in 1975 became the Directorate of Fisheries. A current proposal to the Indian Government is to establish a Fisheries Development Corporation.

Since World War II, a few attempts to exploit various fisheries on an industrial scale have been made, the most recent of which was a deep-sea fishing joint venture Indo/Tata-Thai, which lasted two years, 1978-1979.

The existing cold storage facilities were constructed in 1968, consisting of a 5-tonne/day capacity ice plant and 15 tonnes of cold storage.

In the early 1970s a settlement scheme was introduced to increase the size of

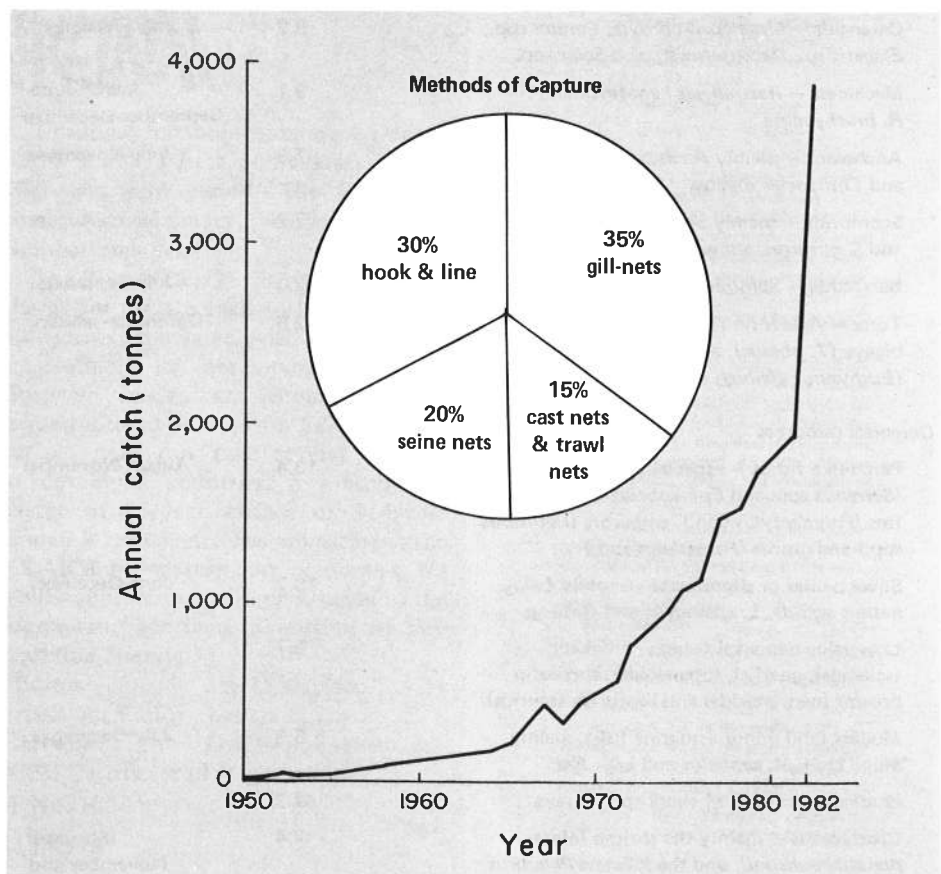
the fishing community. So far about 125 fishermen families have settled from mainland India.

A training center was set up in 1977 to train youths in mechanized fishing. Each year, 30 candidates undertake a 9-month certificate course. Subsidies are available for purchase of small boats with outboard motors to bonafide fishermen.

In research, an Exploratory Fisheries Project began in 1971. The survey vessels are two 17-m trawlers.

The Fisheries

Annual landings have increased steadily over the past 30 years from 44 tonnes in 1950, with rapid increases in the past few years to 3,850 t in 1982 (see graph). Of 700 recorded species, there are around 200, classified into 62 groups, of economic importance.



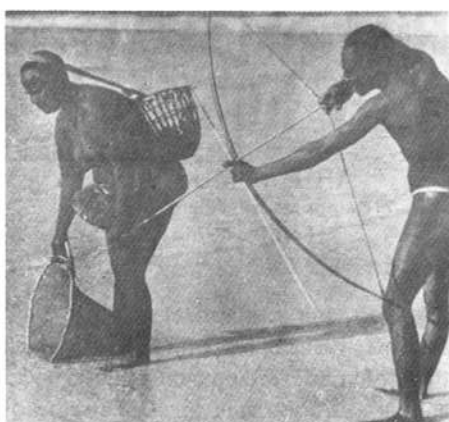
Marine fish landings in Andaman and Nicobar Islands since 1950.

The major groups, main fishing seasons and their proportion of annual landings are shown in the table.

Although molluscan shellfish are only consumed by aborigines of the Andaman Islands group, a commercial shell fishery has been in operation since 1929. There are nine demarcated zones which are publicly auctioned each year. A variety of shell handicrafts is produced, mostly for export to India.

Equipment

Traditional fishing boats are simple, wooden vessels propelled by paddle, punting and sail. Three types are recognized—flat bottomed, round bottomed and Burmese dugout—ranging in length from 3 to 11 m. Crew sizes are 3-5, 4-6 and 6-16, respectively.



The Island aboriginal groups still catch fish this way.

Major traditional gear types include drift gill nets and seine nets. The most

advanced gear is an anchored seine made of cotton consisting of a codend and tapering wings. Operated from a boat, it is anchored across the current, which keeps the net open. Cast nets and hook-and-line gear are also in use.

The Island aboriginal groups still use ancient fishery technology described from the Paleolithic age in India. Boats are simple dugouts, sometimes with outriggers, rarely with sails, from 4 to 15 m



The author, standing beside a Burmese dugout.

long. Fishing methods range from hand-catching at night with flares, various poisons, harpoons, bow and arrow to hand-dragged scoops and tanglenets.

Effort

Excluding aboriginal craft, the fishing fleet consists of about 760 traditional craft and 37 mechanized 10-m boats, using 620 gill nets, 26 boat seines, 540 cast nets, 19 shore seines and innumerable sets of hooks and lines. Most of the subsidized engine-powered vessels are now used as ferries or cargo boats. There are about 2,300 fishermen—1,700 full-time, 400 parttime and 170 occasional; nearly all are emigrants from India. Women play no roles in either fishing or marketing.

Marketing

The catch is generally sold directly by fishermen. A small proportion is bought by middlemen who sell from door to door or at the road side if there is no nearby marketplace.

Table. Fishery resources and their seasonality, Andaman and Nicobar Islands.

Resources	% of catch	Peak season
Pelagic resources		
Sardines — <i>Sardinella</i> spp., <i>Dussumieria</i> spp., and <i>Anodontostoma</i> sp.	13.9	July-December
Carangids — <i>Megalapsis cordyla</i> , <i>Caranx</i> spp., <i>Elagatis</i> sp., <i>Decapterus</i> sp. and <i>Selar</i> spp.	9.2	July-December
Mackerels — <i>Rastrelliger kanagurta</i> and <i>R. brachysoma</i>	9.1	March-June September-December
Anchovies — mainly <i>Anchoviella commersoni</i> and <i>Thrissocles mystax</i>	7.6	June-November
Scombrids — mainly <i>Scomber commersoni</i> and <i>S. guttatus</i> ; some <i>Auxis thazard</i>	7.2	March-August
Barracuda — <i>Sphyræna jello</i>	2.9	July-September
Tuna — yellow fin (<i>Thunnus albacore</i>), bigeye (<i>T. obesus</i>), albacore (<i>T. alalunga</i>) (<i>Euthynnus affinis</i>), and skipjack (<i>E. pelamis</i>)	2.6	December-January
Demersal resources		
Perch-like fishes — especially <i>Lates</i> sp., cods (<i>Serranus</i> spp. and <i>Epinephelus</i> spp.), threadfins (<i>Polydactylus</i> spp.), emperors (<i>Lethrinus</i> spp.) and grunts (<i>Pomadasys</i> spp.)	13.4	August-November
Silver bellies or slipmouths — mainly <i>Leiognathus equula</i> , <i>L. splendens</i> and <i>Gaza</i> sp.	10.2	June-December
Low-value demersal fishes — croakers (scianids), goatfish (upeneoids), threadfin breams (nemipterids) and lizardfish (saurids)	5.7	—
Mulletts (and minor estuarine fish), mainly <i>Mugil tade</i> , <i>M. cephalus</i> and <i>Liza</i> spp.	5.3	July-December
Sharks and rays — 11 shark spp.; 6 rays	2.7	—
Crustaceans — mainly the shrimp (<i>Metapenaeus dobsoni</i>), and the lobsters <i>Panulirus polyphagus</i> and <i>P. ornatus</i>	2.4	(Shrimps) November and February-March

Most of the catch is sold fresh; only 15% is processed—salted or sun-dried—with the usual defects of poor salting, rancidity and high sand content.

Potential

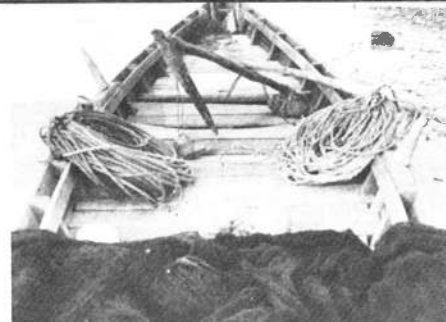
The available survey reports indicate the presence of fairly large stocks of both pelagic and demersal resources, as shown in the table. However, bottom trawling is limited due to the narrow shelf and rough bottom. Best results have been in 20 to 29 m depths, where average catch/hour was 200 kg. Longlining trials over 5 years have yielded catch rates of 9 fish per 100 hooks, and trolling, 25-40 kg/hour.

Traps have also been successful, one survey yielding 680 kg for 125 hours of effort.

Productivity data suggest that a total annual production of 470,000 tonnes could, in theory, be generated within the 600,000-km² territory. However, actual harvests would be a fraction of this amount, depending on the economic features of the fishing operations.

Long-term planning is needed by an outside agency in consultation with the local administration, taking into account all expected future developments. A Fisheries Development Corporation may be set up with the initial objective of on-board processing and direct export to nearby countries until shore-based facilities are developed.

Top: Round-bottomed anchor-net craft ready to move out for fishing. *Middle:* Aberdeen jetty, the largest marine fish landing center of Andaman and Nicobar Islands. *Bottom:* Burmese dugout (side view) with snail curved keel.



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(Sgd.) J.L. Maclean, Chief Editor

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