ATLAS OF THE LIVING RESOURCES OF THE SEAS


World Ocean

The first ten maps of the numerical series (1.1–1.10) deal with the resources in the World Ocean. The first of these maps (1.1) gives the production of phytoplankton (mg C/m²/d) and delineates the areas with intensity of production under 5 different gradations.

The second map (1.2) gives distribution of zooplankton in terms of mg per metre cube in four different gradations. It is seen that the largest quantity of zooplankton is available in the areas of high phytoplankton production. The world fish catch for the year 1968 in different fishing zones along with estimated potential is given in map 1.3, the next map presents it in terms of value. Based on the catches in 1968, the distribution of catches of demersal fish, coastal pelagic fish, tuna and tuna-like fish, whales, crustaceans have been given in separate maps Nos. 1.4 to 1.9. The next map (1.10) gives the state of exploitation of all these major stocks, under three different categories, viz., intensively exploited, moderately exploited and unexploited or little exploited in different areas of the world.

Fish Migration

The next set of maps (2.1–2.7) present a picture of migration of about seven well-known species in selected major oceanic areas of the world. The first map depicts the migration of North Atlantic Cod stocks (in all about 12), substocks, main spawning areas and routes of their migration in relation to principal oceanic currents. The next
map (2.2) locates spawning areas of Atlantic-Scandinavian Herring and feeding areas of small immature (under 4 years) and of young adults (4–12 years) along with the routes of migration. Map 2.3 gives geographic distribution and area of main concentration from November to January, March–June, and September–October of South West Atlantic Anchovita and its route of migration. The feeding and spawning grounds of North Pacific Salmons (Asian Salmon, Bristol Bay Salmon and Gulf of Alaska-Oregon Salmon) and the routes of their migration are given in the map 2.4. The next map (2.5) gives the spawning area of North Pacific Albacore along with routes of migration of juveniles and adolescents and adults (over 6 years). A more elaborate picture including spawning grounds, feeding grounds and fishing grounds of Pacific Bigeye Tuna along with the cause of migration of juveniles and adults is given in the map No. 2.6. Only one map (2.7) deals with the migration in crustaceans. In this map main fishing grounds of Gulf of Mexico Penaeid Shrimps (Pink shrimp, white shrimp and brown shrimp) are given and the routes of migration of their juveniles and larvae are shown.

**Major Oceanic Areas**

The *alphabetical series* gives the distribution of different resources in some of the major oceanic areas of the world. Of this series ‘A’ has been devoted to the resources of North West Atlantic. A.1 contains two maps dealing with the demersal resources. One of these gives the main fishing grounds of Cod and Haddock, their estimated potential and the course of winter migration of Haddock. The second map gives main fishing grounds and estimated potential of red fish, yellow tail flounder, witch, American plaice, silver hake and grenadier. A set of figures give spawning concentrations, feeding and location at different depths in different seasons of the year. Map A.2 gives similar information in respect of pelagic resources such as Herring, Mackerel, Capelin, Alewife, Swordfish etc. and A.3 shows crustacean resources (snow crab, northern lobster and deep sea prawn). A.4 gives depthwise location of crustacea and molluscan resources.

Similarly, the information about demersal, pelagic, molluscan and crustacean resources along with potentials is given about Northeast Atlantic (B series), Mediterranean Sea (C Series), North-West Pacific (D Series), North-East Pacific (E Series), East-Central Atlantic (F Series), West-Central Atlantic (G Series), Indian Ocean (H Series), West-Central Pacific (I Series), East-Central Pacific (J Series), South-West Pacific (K Series), South-East Pacific (L Series), South-West Atlantic (M Series), South-East Atlantic (N Series),

**Indian Ocean**

The information about the Indian Ocean (including both Western and Eastern Sectors) has been given in three maps of H series. The first map shows the potential of demersal resources all along the coasts of Indian Ocean. The total estimated potential according to the figures is from 6,500,000 to 8,000,000 tons. Relative abundance of species at various depths off Dar-es-Salaam, off Seychelles Is. and off Bombay have been
shown in the figures.

The information about Pelagic Resources is given in the map H.2. The potential indicated in the map is around 6 million tons of coastal pelagic resource and 6 lakh tons of tuna and tuna like species.

The distribution of crustacean resources (non-penaeid shrimps, penaeid shrimps, deep water shrimps, deep sea lobsters and crabs) is given in the map H.3. In separate figures depthwise distribution has also been shown. The total potential indicated is about 300,000 tons.

The information about the Antarctic Ocean has not been given separately. Although most of the information is based on 1968 figures and revision of the atlas would be necessary from time to time, there is hardly any doubt that this atlas is first of its kind to incorporate so much of information about the principal marine resources on world-wide scale. It will be very useful to the fishery scientists and administrators. The FAO Department of Fisheries have done a commendable job.

— V. S. Bhatt