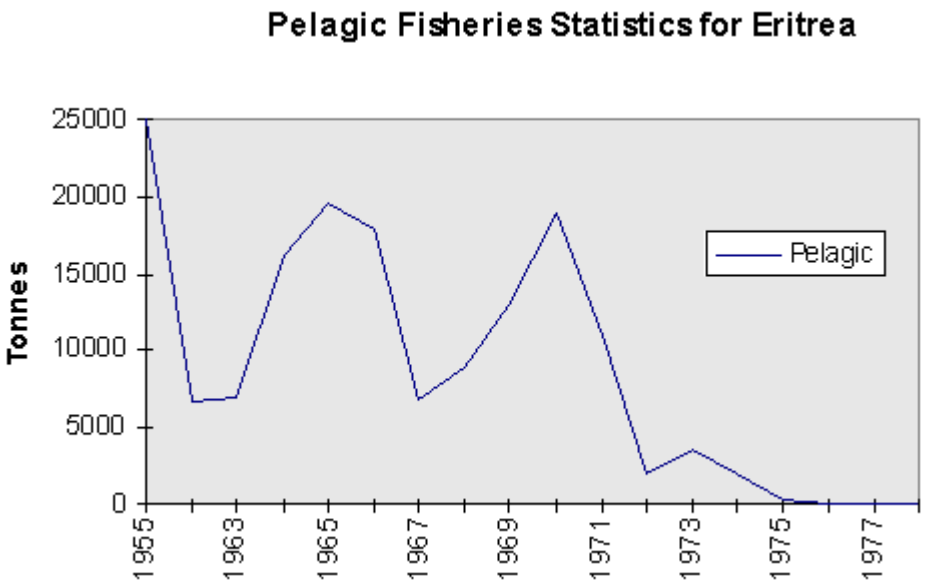
The Fisheries Of Eritrea

[Click here for map of Eritrea and neighbouring countries]

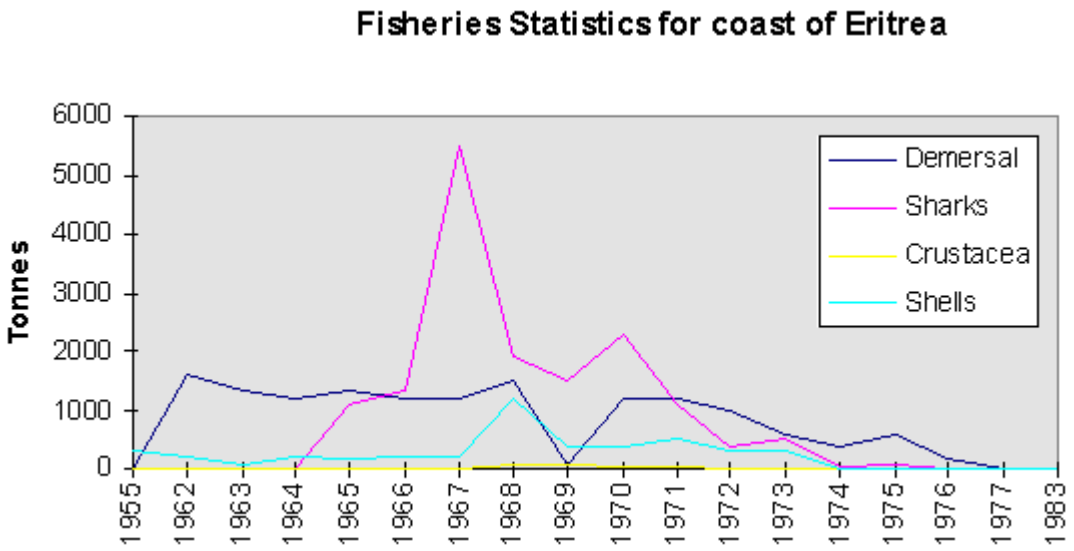
1. Before the War of Independence

Fishing activities were first developed from subsistence levels using canoes and small plank boats under sail and oar. This was followed in the 1950s by motorised boats. Fisheries developed rapidly, particularly the small pelagic fishery for sardine and anchovy which makes up the largest proportion of the known fish resources in Eritrean waters.

This small pelagic fishery was active along the Eritrean coast 30 to 40 years ago with production of 25,000 tonnes (mostly sardines and anchovies) employing a seasonal workforce of up to 20,000 people with exports of fish meal and dried fish to Europe and Asia. The fishing method was beach seining, with a party of fishermen spreading the catch out on the beach to dry, and a second party, often including women, following behind to collect the dried product. Nomads would make a seasonal journey to the coast to participate. The war for independence from Ethiopia brought this industry into decline so that by 1975 production had ceased. There was also a large drop in production in 1967, which is attributed to the temporary closure of the Suez canal during the Suez crisis.



Prior to the war, there was also a fishery for demersal species, shark and crustacea. Below are the Ethiopian government statistics for these fisheries. The most interesting observation is the corresponding increase in shark production for regional markets with the temporary closure of small pelagic markets in 1967.



2. During the War

Throughout the war years fishermen traded with Yemen, which was the only market available for their production, as well as the only possibility for the supply of most foodstuffs and inputs for fishing, which were not available in Eritrea. Fish production by Eritrean fishermen turned predominantly to sun dried and salted shark and shark fins.

Meanwhile, visiting Yemeni fishermen expanded their catches of demersal fish from the Eritrean coast. Eritrean fishermen depended on their goodwill to allow them to land and market fish in Yemen.

3. Current Situation

Fishing has declined drastically in late 1995 and 1996 in the southern Red Sea from closure of the Yemen market due to the territorial dispute with Yemen over the Hanish Islands. Fishing communities in Eritrea are experiencing severe hardship. Not only has their income declined to almost nothing due to the loss of their major market, but they have also been cut off from the source of fishing inputs such as fuel and engine spares. Trading with Yemen for other goods and services, including clothing, foodstuffs and even health care and education, has also ceased for the moment.

The small pelagic fishery for sardine and anchovy, which used to be the main component of fish production, is at a complete standstill. No activity has taken place since the war and no stock assessment work has been done to confirm the continued presence of the stock, which may have an annual yield of as much as 50,000 tonnes. The discovery of the huge anchovy fishery off Peru and Chile has outcompeted other many other small pelagic fisheries in scale and efficiency.

4. The Marine Environment

The environment of the southern Red Sea differs from the northern end, which is characterised by inshore fringing reefs with steep drop-offs. In the south, strong southerly winds between October and March bring cool, nutrient-rich water from the Gulf of Aden (an area of upwelling) through the straits of the Bab al Mendab into the Red Sea. The broader continental shelf also contributes to greater resuspension of nutrients from benthic sediments by wave action. Both these processes result in increased productivity compared to further north in the Red Sea.

Increased algal productivity and sediment resuspension also contribute to increased turbidity, which

along with the cooler water temperatures means that the marine environment is less dominated by reef building corals, although there are numerous reefs in sheltered areas, particularly in the Dahlak islands. Beds of macroalgae and seagrass are common, and warm minimum temperatures make the environment relatively hospitable to mangroves in sheltered areas, despite low levels of fresh water.

5. Marine Fish Resources

The status of exploitation of fish resources can only be estimated. A fisheries catch/effort statistics programme has begun in 1996, with enumerators working at artisanal landing sites in Massawa and Assab, and observers aboard the six Saudi trawlers that currently have licenses from the Government of Eritrea.

Figures for all fish stocks in the waters off Eritrea are old (1960s). There is evidence that uncontrolled fishing has taken place during and since the war, mainly by Yemeni artisanal fishermen but also by Egyptians and others taking advantage of the problems faced by the Eritreans or Ethiopians in managing fish stocks during the war years. A much-needed stock assessment exercise is planned, with French government funding, a research vessel is currently being prepared.

The table below presents the best estimates for catches in Eritrean waters by Eritrean fishermen, Yemeni fishermen and the licensed industrial fishery. Note: these figures are estimates from poor data.

Select for Estimated Catch and MSY

6. Artisanal Fishing

The artisanal fishery is carried out by 2 classes of fishing vessel: houris and ambuqs. They are mostly owner operated, fishermen work in groups based on their village of origin.

The traditional houri of the southern Red Sea area is built of low quality timber, often using imported pine for planking and local acacia for frames. Houris are built by itinerant boat builders at beach locations to order of a fishermen, who often collects all the materials before hiring the boat building team to complete the construction. The boats are long and narrow, typically 9 to 11 metres length overall and 1.5 to 2 metres beam.

The structural integrity of most houris is poor. There is usually little strengthening along the length of the boat, indicating that the boats are not expected to be used in heavy sea conditions or to be regularly beached. Most houris will sail well and the use of the lateen sail is widespread, though fishermen do not expect to sail towards the wind.

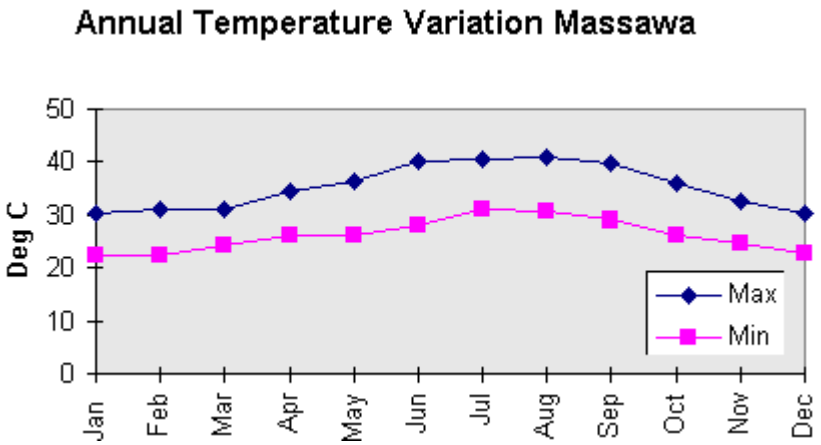
The sambuq type boat is widespread in the region. Built by itinerant craftsmen at beach locations from imported hard wood and local timber framing, the shape has evolved over centuries for the steep short seas of the southern Red Sea and the ability to land on open beaches. The sambuq type is an open boat in spite of its size. Bulky loads can then be carried by temporarily extending the topsides upwards. Sambuqs are widely used for trading, transport and carrying goods as well as for fishing.

The gears used in the artisanal fishery are mostly gillnets (shark and pelagic fish) and some handlines (demersal fish). In regions where no ice is available (everywhere except Massawa and Assab) fishing is exclusively for shark using gillnets. All activities are manual with no hauling devices. Crews on houris are 6 - 7 men and on sambuqs up to 10 men.

Throughout the region fishermen have traditionally moved in response to the seasonal weather conditions. In the strong south winds of October to March fishing is restricted in some areas and many fishermen move to the Dahlak islands. Fishermen are also used to travelling long distances to sell their catch. In the Southern Red Sea Province fishermen make trips of 2 to 4 months, catching and drying shark in remote locations before travelling across the Red Sea to Yemen to sell their production, buy fuel and food items and return home.

7. Climate

The Red Sea coastal plains of Eritrea which are characterised by rocky deserts and sand dunes, very high temperatures, annual evapo-transpiration of 2,000 mm and annual rainfall of less than 200 mm. Temperature records for Massawa are as follows:



The people of Massawa claim their city to be the hottest city in the world, not in terms of maximum temperatures, but in the overall average: it never gets cold or even cool. During the summer months the temperature often reaches 40 degrees during the day and commonly remains above 30 degrees for weeks at a time, even at night.

The rain months are from October to March with 90% of the very small rainfall in January and February.