

The Artisanal Shark Fishery of Southwest Madagascar

by Fran Humber



1

The Madagascan Shark Fin Trade

As the price and demand for shark fin has increased over the last two decades, there has been a resultant increase in the shark fishery in Madagascar. In 1987, recorded exports of shark fin from Madagascar were just 3000 kg but by 1992, they were almost 50 metric tons. Exports have since fluctuated between 20 and 40 metric tons per year.

The number of sharks taken by the local fisheries remains unquantified due to the fact that there are numerous small-scale artisanal fisheries located throughout Madagascar. Previous research on the artisanal fisheries of northwest Madagascar, carried out in 2000 by Earthwatch, highlighted a decline in shark numbers and the collapse of the local fishery.

In October 2006 Blue Ventures initiated the first phase of a shark research and conservation programme in the region of Andavadoaka, southwest Madagascar. This research initially monitored the status of shark fisheries in 11 villages stretching 40 km northwards to Morombe. After the success of the first monitoring programme, a second monitoring programme was started in May 2008 in the region surrounding the town of Morondava, approximately 200 km north of Morombe, to incorporate important offshore islands where shark fishing is prevalent.

The monitoring programme trains and employs local "sous-collecteurs" (data collectors) in each village. The *sous-collecteurs* are given measuring tapes and notebooks to record biological and socioeconomic data for each shark landed, along with digital cameras to create a photographic log of the animals. The photos also aid species

identification that is complicated by the highly varied use of local names. The project also monitors the shark fin 'middlemen' (members of the community buying fins from the fishers and selling them to the Asian fin traders in the larger towns and cities) in the region and record the number and quality of fins they collect, along with their village of origin.



3



2

The indigenous Vezo population of southwest Madagascar is reliant on coastal resources for food and income. Blue Ventures' research site has been based in Andavadoaka in the Toliara province since 2003, a remote village 150 km north of Toliara and 45 km south of Morombe. The Toliara region supports Madagascar's largest traditional fishery, with over 20,000 fishers operating in the province.

The Recording Project

The aim of the project is to quantify the extent of the artisanal shark fishery and its economic importance within the region. It also aims to highlight the effect of the annual migrations of Vezo fishers along the southwest coastline, traditionally during the months of May to December. The Vezo fishers of Madagascar have had a long tradition of migrating, which acted as a precaution to overfishing resources, and are widely seen to be a semi-nomadic people. However rapid population growth, widespread degradation of coral reefs and related marine ecosystems and the relatively recent arrival of external commercial markets have drastically changed the characteristics of migration. The strong demand for shark fin has acted as a powerful driver for many migrant fishermen and the number of migrants travelling longer distances to target shark-rich waters has increased dramatically in the last five years. A study earlier this year on the Vezo migration by Blue Ventures' Garth Cripps revealed that the primary activity for migratory fishers is now shark and sea cucumber fishing.

The project has already recorded nearly 6000 individual shark catches and includes members of approximately 25 species. Scalloped Hammerhead Sharks (*Alopias Vaka*) account for around 40% of the landed sharks recorded. Data recorded by shark fin middlemen reveal a potentially even greater shark fishery than currently reported by national export figures, with some middlemen employing a group of assistants that sail from village to village buying fins as they go. The scale of fins these collection trips can bring back were largely unexpected, with estimates from one trip at 6000 fins.

The future of shark populations within this region are of grave concern. Whilst fin exports remain dangerously high there is little doubt in the fisher's mind that shark populations have declined in the region. Anecdotal reports reveal that fishers were once able to land large sharks in the lagoons directly in front of their villages but now they must lay their nets in the deeper waters of the Mozambique Channel, 5 - 20 km offshore, to land sharks. As with other fisheries in the region, the introduction of new fishing materials, adapted to new uses by the Vezo, has helped to increase the efficiency with which marine resources have been removed from the seas.



No legislation currently exists to regulate shark fisheries, and fishing continues unreported and unregulated. However, future management measures must be appropriate. In a region where the average daily wage is less than \$2/day and a kilogram of fins can sell for between \$20 and \$80, we cannot expect fishers to adhere to purely conservation motives for reducing fishing effort. Blue Ventures is aiming to reduce the impact on the local shark fishery not only through increased awareness in shark conservation but also through the development of alternative sustainable livelihoods as part of a regional network of marine protected areas.



Images:

- 1) Vezo fisher on Mananja Island, Barren Isles, with shark meat drying in the background. Whilst the fins are the main impetus to catch sharks, the Vezo will consume the shark meat and use the liver to provide oil for cooking. © Garth Cripps.
- 2) Map of Madagascar and study region. © www.flukeart.com.
- 3) An estimated 6000 fins were collected on a trip by an assistant of the shark fin middleman from Morondava. © Fran Humber.
- 4) Local sous-collectors take photos of their catch before they record the data. © Fran Humber.
- 5) Vezo fisher on Mananja Island, Barren Isles, salting fins to preserve them to sell later on. © Garth Cripps.
- 6) Bull shark caught in Bemakoba, north of Morondava, brought back to shore in the local fishing boat (pirogue). © Garth Cripps.



Fran Humber is the Research Coordinator at Blue Ventures www.blueventures.org. She is also currently studying for a PhD on the shark and turtle fisheries in southwest Madagascar with the Marine Turtle Research Group at the University of Exeter www.seaturtle.org/mtrg.