

ARTISANAL SHARK FISHERIES OF THE COMOROS: STATUS AND THREATS

Maoulida Kamal¹, Melissa Hauzer^{2,3}, Chris Poonian², Jeremy Kiszka⁴

¹C3-Comores, Iconi, Grande Comore, B.P. 8310, info@c-3.org.uk

²Community Centred Conservation (C3), 17 Northcliffe Drive, London, N20 8JX

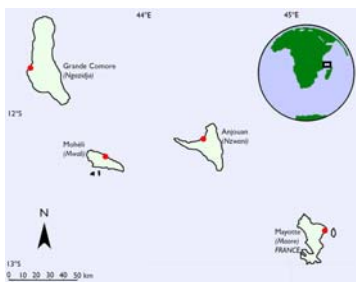
³University of Victoria, British Columbia, Canada

⁴MAYSHARK, Mayotte



ABSTRACT

Over one hundred million sharks are killed by commercial fisheries every year through intentional harvest and bycatch however, little is known of the impact of artisanal fisheries on these species. This work investigated populations, local perceptions, fishing practices and bycatch of sharks in the Union of the Comoros. Artisanal fishers were interviewed about the frequency of shark catches, species caught, gear used and market value. A high diversity of sharks was found to be present in Comorian waters, including *Carcharhinus longimanus*, *Sphyrna lewini*, *Galeocerdo cuvier*, *Carcharias taurus*, and *Carcharhinus falciformis*. On Grande Comore, sharks were caught largely as bycatch, while on Anjouan, sharks were more often intentionally targeted. Shark meat was cheaper (USD 0.5 - 2 per kg) than other fish, such as tuna (USD 3 - 5 per kg); but fins and dried meat were an exception, reaching high values at market, up to USD 40 per kg and USD 5 per kg respectively. Local fishers valued sharks as an indicator of the presence of large schools of tuna (the most important fishery resource). Despite this, a large proportion of fishers on Anjouan (42%) admitted to intentionally targeting sharks, indicating that this island should be a priority for elasmobranch fisheries management in the Comoros. Overall, sharks did not currently appear to be highly valued as a resource in the Comoros, however the disproportionately high value of shark fins and increasing demand from overseas could result in rapid and unsustainable increases in shark catch. A fuller understanding of the current state and diversity of shark populations in the Western Indian Ocean is both urgent and essential for effective regional conservation measures.



METHODS

Semi-structured questionnaires were conducted with artisanal fishers in local languages

Completed in Grande Comore and Anjouan (Comoros) - 100+ questionnaires per island

Currently finishing surveys on Moheli

Questionnaires investigated local perceptions, fishing practices and bycatch

Difficulties were encountered in species identification using local names - one name for several species, several names for the same species as well as differences in names used between islands in the Comoros

Fishers were generally very willing to provide information

FISHING GEARS

Hook and line/s predominant gear (95%+)

Nets rare <5%

SPECIES CAPTURED

Most commonly captured species were Oceanic whitetip (*Carcharhinus longimanus*), Grey reef shark (*Carcharhinus amblyrhynchos*) Hammerheads (*Sphyrna spp*)

DEMAND

In Comoros, fishers recognize the high value of fins and jaws (USD\$50-\$100/kg compared to meat at USD\$2/kg) dried and sent to Tanzania or Madagascar

Majority of Comorians state that shark meat is less desirable than meat of other species unless dried (USD\$6/kg)



BYCATCH

Less valuable than other fish and so not generally intentionally targeted

If caught accidentally they are still sold for consumption for whatever price they will fetch

On Anjouan, 40% fishers caught sharks deliberately compared to 10% on Grande Comore.

Fishers specialized in shark fishery can be found on Anjouan.

PERCEPTIONS

'The shark tries to catch the same fish as you but if he can't he will attack the boat'

'You can find human body parts in the belly of a shark'

'People believe that sharks bring the tuna so people that fish sharks are badly viewed by the villagers'

Some people sing a special song when they catch sharks

TRADITIONAL STORIES

How the shark got a toothy grin
Shark and turtles did not get along before turtles had shells. Originally, turtles were just fleshy and easily caught and eaten. One day the shark gathered all his friends to eat turtles after Friday prayer. The turtle was warned and he prayed to Allah for protection and was given his shell. When the sharks came to eat him they broke their teeth on his shell.....which is why sharks have a toothy grin!

How the shark got a pointed head
The rabbit and shark were good friends. One day the rabbit went to play in the sea with the shark. The shark's father asked for the rabbit's liver but the rabbit refused. The next day the rabbit told the shark to come and play on the land. There he tricked the shark and dropped a huge rock on his head and the shark's head became flat and pointed.

CONCLUSIONS

Fresh shark meat still low value compared to other fish

Fear and loathing of sharks- social marketing could reduce deliberate capture

Anjouan has better access to market for shark fins (also more Chinese business) than Grande Comore

More quantitative data for artisanal fisheries necessary, not just for sharks but for other megafauna (turtles, cetaceans, dugongs)



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