



FISHERMEN KNOWLEDGE AND PERCEPTION ON MARINE MAMMALS IN KERALA AND MAHARASTRA

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Introduction

- Marine mammals aggregate in areas of fish abundance for food
- They are incidentally caught in fishing gears, thus making them vulnerable. A large number of cetaceans are being caught continuously (Yousuf *et al.*, 2008), which is causing concern.
- Wildlife (Protection) Act is the existing instrument to prevent incidental killing of marine mammals, but the extent of awareness of this act and the perception of fishermen on marine mammals is not fully understood.
- It is imperative to document fishermen perception and technical knowledge on marine mammals
- A interview survey was carried out in fishing villages of Kerala and Maharashtra to collect fishermen perception and knowledge on marine mammals.

Methodology

- In August and September, 2009, fishermen interview surveys were conducted in few fishing villages in Maharashtra and Kerala states on west coast.
- A questionnaire was developed to obtain information on fishermen knowledge and perception on marine mammals. A total of 370 fishermen of different age groups, comprising 200 fishermen from nine districts of Maharashtra and 170 fishermen from three districts of Kerala were interviewed.

Important Highlights

- Most of the fishermen in both the states have the ability to distinguish dolphin species but not whale species. However, their ability to differentiate the species varied depending on their age and experience.
- Fishermen within 35 years of age and 10 years of fishing experience have less ability to distinguish. Similarly, fishermen who are involved in oceanic and deep sea fishing are aware of more cetacean species than fishermen involved only in coastal fishing.

- About 94% of the respondents did not agree that there is a relationship between weather and marine mammal distribution. About 74.6 % of fishermen stated that marine mammals are sighted in all the seasons while 18.8% of fishermen opined that cetacean sightings are more in post-monsoon season.

- In Maharashtra, 88.8% denied relationship between fish and marine mammal distribution. In Kerala, 98% of fishermen told that marine mammal occurrence is related to the abundance of pelagic fishes such as sardines, mackerel, tuna and seer fish.

- A vast majority of fishermen (>98%) in Kerala told that marine mammal populations have increased in recent years. In Maharashtra 52% of fishermen agreed on this.

- In Kerala, fishermen complained that dolphins forage on fish caught in their nets. About 90% of fishermen who use monofilament gillnet for sardine fishing complained of heavy economic loss due to net damage by dolphin forage behaviour.

- About 2% of fishermen informed that they are using additional net, which is specially designed to surround the purse seine as a measure to protect fish caught in the net and to avoid net damage. As this operation needs another boat and net, this method is practiced by only a few fishermen.

- About 83.3% of fishermen in the two states agreed that there are incidental catches of dolphins in the fishing nets. However, they denied intentional killing or targeting marine mammals.

- A vast majority of respondents attributed cetacean entanglement to multifilament gillnet fishing, but not in monofilament gillnets. Fishermen in Maharashtra said that incidental catch is a rare occurrence in dol net (10%) and trawl net (1%) and purseseine (1%) (Fig. 1).

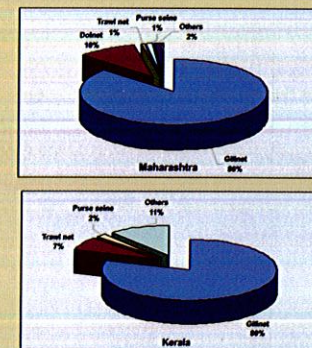


Fig.1. Contribution of different gears to incidental catches of marine mammals in two states (as stated by fishermen)

- Consumption and illegal sale of incidental catch was admitted by the fishermen in Kerala, whereas in Maharashtra, 98.5% of fishermen denied dolphin consumption or use for other purposes.
- Most of fishermen of all age groups in both the states were aware of Wildlife (Protection) Act. Many elders (>65%) were not aware of the act because of their poor literacy.
- In Maharashtra, about 99% of the fishermen responded in favor of the Wildlife Act because of their sentimental approach to marine mammals. Most of the fishermen in this state told that they worship of marine mammals, particularly whales, because of their belief that whales bring fishes from deep sea to their fishing range.
- The response was different in Kerala. Majority of fishermen (77.5%) urged removal of Wildlife Act and wanted legal consent to kill dolphins whenever fishing is disturbed by dolphins.

Reference

Yousuf, K.S.S.M., A.K. Anoop, B. Anoop, V.V. Afsal, E. Vivekanandan, R.P. Kumarran, M. Rajagopalan, P.K. Krishnakumar and P. Jayasankar. 2008. Observations on incidental catch of cetaceans in three landing centres along the Indian coast. *Biodiversity Records JMBA UK Online publication*