



Under the Indian National Centre for Ocean Information Services (INCOIS) funded project on “Validation and Dissemination of Ocean State Forecast Advisories along Gujarat Coast, ICAR-Central Institute of Fisheries Technology is investigating on Jelly fish distribution and development of a jellyfish prediction forecast system along the Gujarat coast.

Recent study conducted by ICAR-CIFT, reveals that jellyfish shows a strong seasonal fluctuation, with peak abundances during summer (March-April) and winter (December-January) months at a depth of 0-110m. Fishers reported that jellyfish are more dominant along Okha and Jakhau coast of north Saurashtra and off Veraval, Diu and Madhwad regions along southern Saurashtra. Jelly fish bycatch in each trip varied from 10-2000 kg/haul and comes in trawl catch mostly associated with *Johnius* sp., Ribbon fish, and white pomfret.

Currently fishers discard the jellyfish and change the fishing grounds, where the abundance is located, which often causes significant economic losses. Fishers also correlate the occurrence of jelly fishes with wind speed and direction.

There are reports that there is a targeted fishery of jelly fishes in the northern Gujarat and Kutch region. This shows the scope for establishing a proper harvesting mechanism and a good market for jelly fishes in the country. research need to be concentrated in this direction



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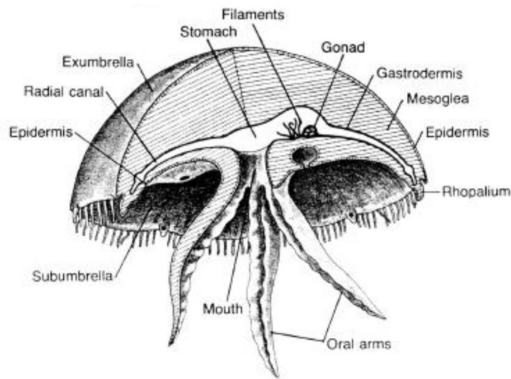
Jelly fishes : Boon or bane for fishery?

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What are jelly fishes ?

The Phylum Cnidaria, or coelenterates, includes the jellyfish, corals and sea anemones, and numbers over 9,000 species. They are among the most primitive animals and distributed largely in marine systems worldwide. Few species are also found in freshwater ecosystems. Jellyfish is a group of soft body animal also known as gelatinous zooplankton. They are found all over in the world's oceans and estuaries, living from the surface to the greatest depths. Jellyfish exist in all oceans across the world (Mohan et al., 2011) and appear to be increasing in marine ecosystems in world.



The main feature of a true jellyfish is the umbrella-shaped bell. This is a hollow structure consisting of a mass of transparent jelly-like matter known as mesoglea.

Morphology of Jelly fishes

Mesoglea, contain water, collagen and fibrous protein. Oral arms and other swimming organs are externally visible in mesoglea



Jellyfish (Cnidaria: Scyphozoa: Rhizostomeae) have always been an important fishery commodity and a multi-million business in the world. China alone was reported to produce 62,969 tonnes of jellyfish, an increase of 34% from the previous year, creating revenue of about 149 million USD. (FAO, 2011). Study by Badonia & Devadasan (2005), ICAR-CIFT described various economically important products and scope for exporting processed jelly fishes.

Study by Khong et al, 2015 reported four major edible jelly fishes in the seafood market. Among the four *Acromitushardenbergi* and *RRhopilema hispidum* are the commercially active species.

Economic importance of jellyfishes



The occurrence and abundance of the jelly fishes have been increasing in the recent times and presently many fishermen considered as a menace, since it clogs the nets and increase the labour required.

Jellyfishes of India

ICAR-CMFRI reported different species of jelly fishes from Indian waters which belongs to 9 families and 14 genera. The major species reported are *Catostylus sp.*, *Rhopilema sp.*, *Chrysaora sp.*, *Chriopsoides sp.*, *Lychnorhiza malayensis*, *Acromitus flagellatus*, *Crambionella sp.*, *Cephea sp.*, *Lobonema sp.*, *Chrysaora sp.*, is the most dominant jellyfish found along east and west coast of India. A study by ICAR-CIFT reports that in Veraval, Gujarat, *Rhopilema hispidum* is the major species landed as bycatch.