



## Marine Fish Landings of Karnataka, 2020: An Overview

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Karnataka state along the Southwest coast of India is at the forefront of marine fisheries development in India. Historically known as the 'mackerel coast' and it is the eighth largest state in India. Karnataka state is endowed with vast marine and freshwater resources. The state has 320 km of coastline runs along with three districts namely, Dakshina Kannada, Udupi and Uttara Kannada with 27,000 sq. km continental shelf and 87,000 sq. km of exclusive economic zone besides with 8,000 ha of brackish water resource. Karnataka supports livelihood of 1.7lakh fisherfolk population residing in 162 marine fishing villages (HoFS, 2020; Kuriakose and Paul., 2017). The marine fish production in the state is 3.56 lakh tonnes (t) in 2020 (13.74% of total, 25% decrease from last year).

Among the three coastal districts of Karnataka, Dakshina Kannada alone contributes 40% of total catch followed by Uttara Kannada (31%) and Udupi (29%). Mangaluru and Malpe fishing harbours are the main contributors in the Dakshina Kannada and Udupi districts respectively. The main characteristic of marine fisheries in Karnataka is the predominance of pelagic resources. In the year 2020, the estimated pelagic landing of 3.56 lakh ton accounted for 66% of the total marine fish landings. The fish production from the state contributed about 4.27% of India's total fish production for the year 2018-19 and ranks 6<sup>th</sup> position. The current level of per-capita fish availability in the state is around 6.8 kg. The pelagic fishery wealth of Karnataka coast, mainly comprising mackerel and oil sardine, used to be traditionally harvested by operating shore seine known as "Rampani".

The estimated marine fish landings in Karnataka (374514 ton) registered a 25% decrease during 2020 as compared to 2019. The decline in catch this year was due to reduced effort in terms of a number of operations as well as fishing days due to i) Lockdown ii) Cyclonic weather days and iii) Steep increase in diesel price.

The lockdown declared to control the spread of Covid-19 resulted in loss of several fishing days, economic returns and alterations in the social security of coastal fishers (CMFRI, 2021). A rapid survey made to study the impact of lockdown on the fisheries sector in Karnataka indicated:

### **Economic loss due to absence of marketing facilities**

The announcement and immediate imposition of the first national lockdown took most fishers unawares, especially those engaged in multiday fishing. Around 300 crafts were out at sea and on return, the catch estimated at around 8 ton per boat, could not be disposed of due to the total absence of marketing facilities, complete shutdown of processing and fish meal plants and lack of labour to unload the catch. Therefore, the entire catch had to be thrown back into the sea.

### **Socio - Economic security**

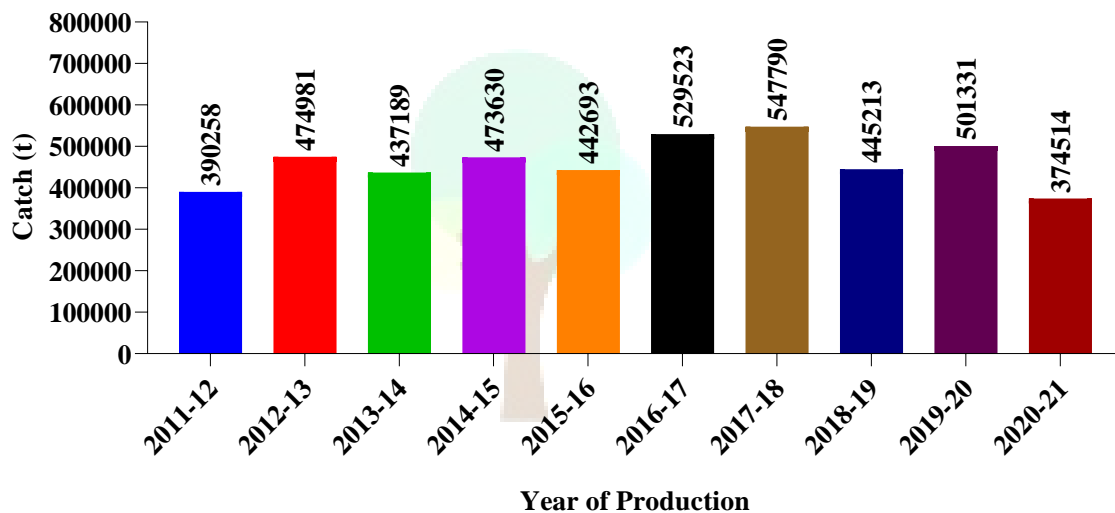
A large number of migrants mostly from Tamil Nadu, Andhra Pradesh, Odisha, Bihar, Jharkhand and interior Karnataka are engaged in fishing (as crew) and related activities. With the



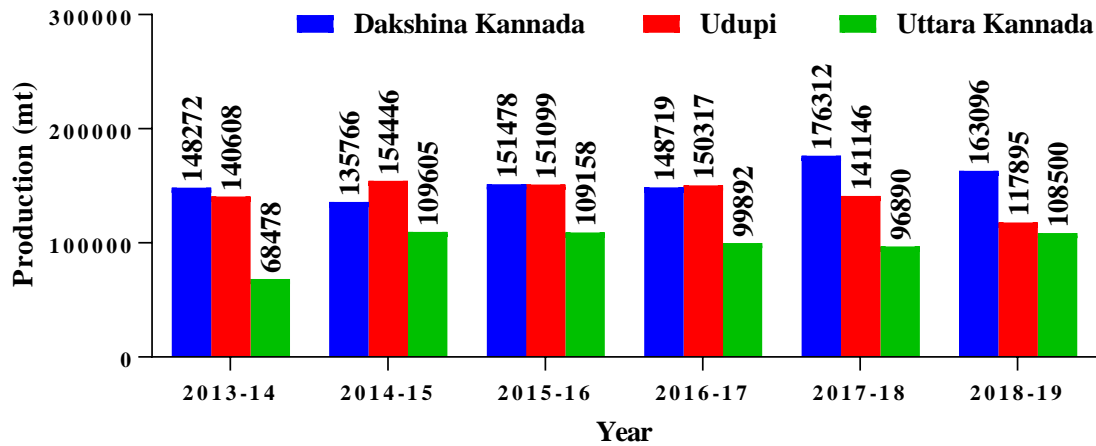
announcement of total lockdown, these migrant labourers were deprived of their jobs. Further, due to restrictions on interstate movement, many were stranded in the landing centres and processing factories. Local fishers were also not certain on what was in store resulting in a lot of social as well as economic uncertainties and apprehension. The contribution of different sectors to the total marine fish landings of Karnataka indicated that trawls were dominant in Karnataka. In Karnataka, the CPUE by all gears except trawls increased. Mechanization, motorization, improved crafts and gears, expansion of fishing grounds, multiday fishing, and improved marketing and processing facilities contributed to an increase in landings over the years.

**Number of Fishermen Population engaged in Marine Fisheries activities in Karnataka, 2019-20**

Part-Time		Full Time		Occasional		Unspecified		Deep-sea	
Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
55,599	39,662	56,891	43,030	5,973	3,684	57,139	44,655	21,388	-



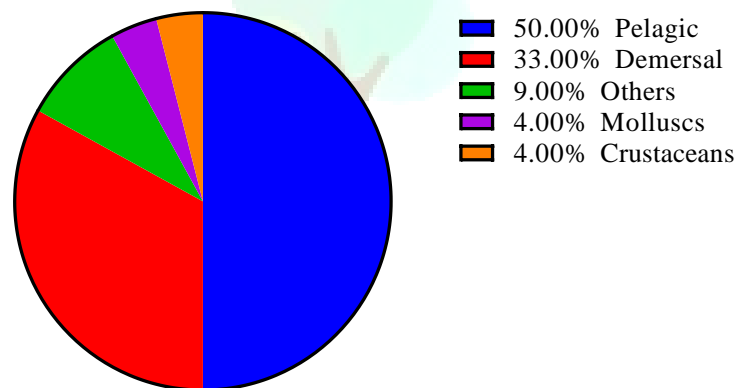
**Figure 1.** Trends in marine fish production of Karnataka in last 10 years (from CMFRI, 2020).



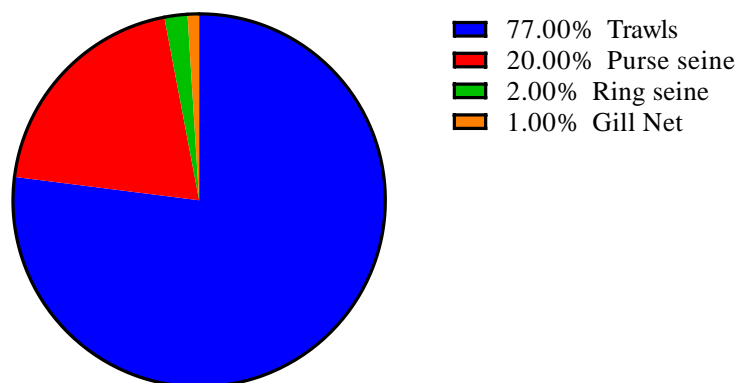
**Figure 2.** Trends in marine fish production district wise of Karnataka in last 6 years (from Dept. of Fisheries Karnataka).

### Components of marine fish landings

Pelagic fishes continued to be the major component of the landings in Karnataka (49.6%) followed by demersal, molluscs and crustaceans in Karnataka. The contribution of pelagic fishes registered an increase and demersal fishes registered decrease in Karnataka. The landings of miscellaneous fishes, which last year was dominated by the red-toothed triggerfish, registered a steep decline of 80 % in Karnataka when compared to previous year landings.



**Figure 3.** Trends in percentage contribution of different marine fisheries resources of Karnataka.



**Figure 4.** Trends in percentage contribution of different fishing gears of Karnataka.



## Pelagic resources

The major groups that constituted the pelagic resources contributed by Indian mackerel (*Rastrelliger kanagurta*), oil sardine (*Sardinella longiceps*), lesser sardines (*S. gibbose*, *Sardinella jussieu* (Tembang), *S. gibbosa*, *S. fimbriata* (Fringe-scale sardine), *S. albello* (Short-bodied sardine), ribbonfishes (*Lepturacanthus savala*), carangids (scads, horse mackerel), tunas (*Euthynnus affinis*, *Auxis* spp., *Katsuwonus pelamis* and *Thunnus tonggol*), seer fishes (*Scomberomorus commerson* and *S. guttatus*), halfbeaks (*Euleptorhamphus velox* and *Euleptorhamphus viridis*) and full beaks. The oil sardine fishery continued to decline but a possibility of improvement in landings during the current year was forecasted when compared to last year. However, to ensure successful spawning during the resulting season, an advisory to protect the available stock along the Southwest coast was proposed.

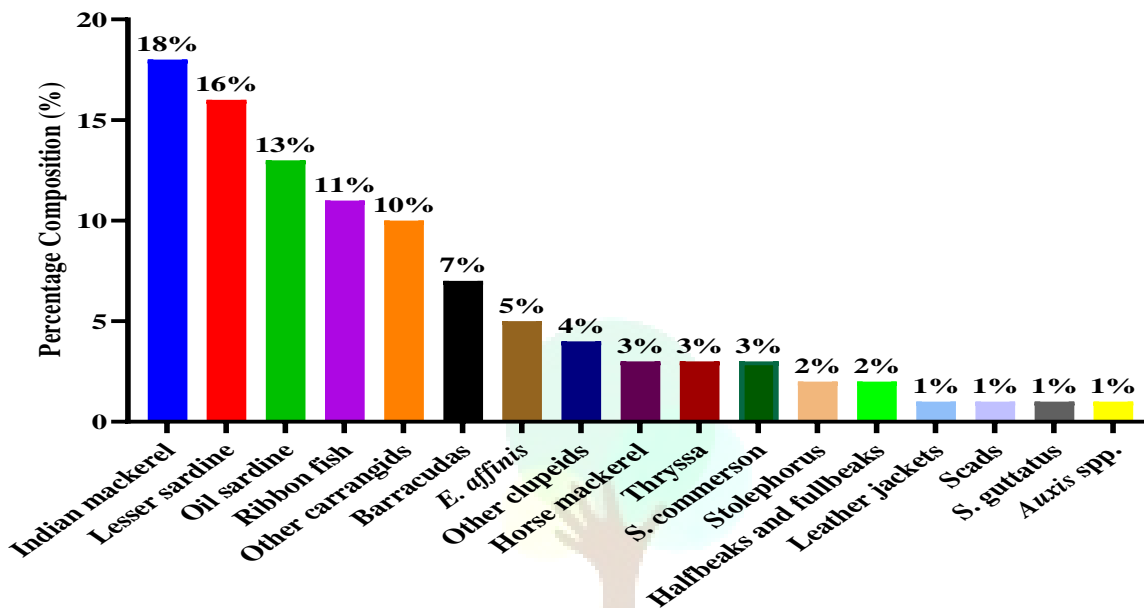


Figure 5. Major pelagic fishery resource landed in Karnataka during 2020

Figure

## Demersal Resources

Major demersal resources landed in Karnataka were threadfin breams (*Nemipterus japonicus* (Japanese threadfin bream), *N. mesoprion* (Red-filament threadfin bream), *N. delagoae* (Delagoan thread fin bream), *N. metopias*, *N. nematophorus* (Thread fin bream) and *N. tolu* (Notched threadfin bream), lizard fishes (Indian lizardfish *Synodus indicus*), Bulls eyes, rock cods, croakers, pomfrets, silverbellies, flatfishes, elasmobranchs and whitefish.

## Crustaceans

The major crustaceans landed in Karnataka contributed by penaeid shrimps (56%), crabs (25%) and stomatopods (19%). Catch, effort trends, species and size composition of shrimps and crabs are presented in the Fig. Total shrimp landing of Karnataka during the year was 7,552 ton which showed a reduction of 40% from 2019. Trawl was the major contributor of shrimps.

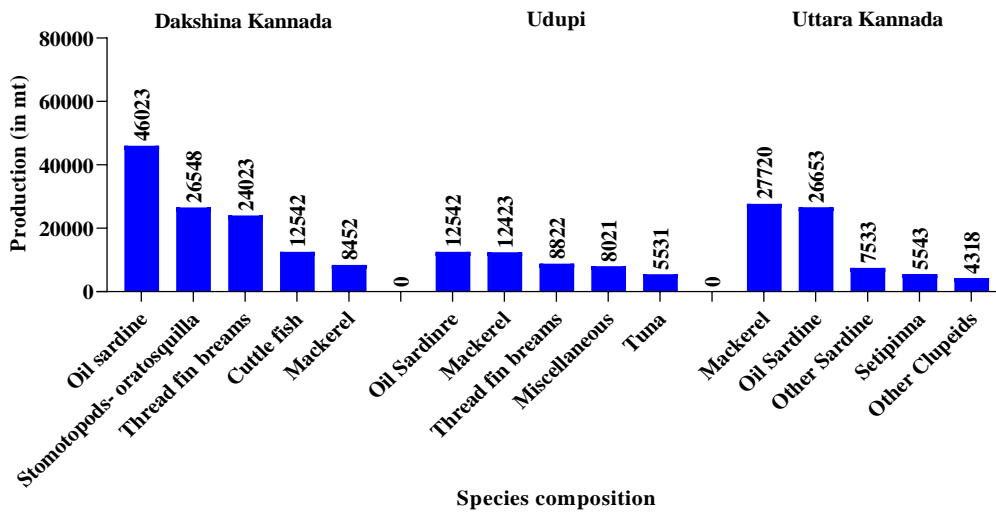
## Molluscs

Cephalopod (squids, cuttlefish and octopus) catch is estimated 14,794 tons during 2020 and registered a 33.6% decrease as compared to 2019. The resource constituted 4% of the total marine fish production of the state. Squids dominated 57.6% followed by cuttlefish 39.8% and octopus 2.6%. *Uroteuthis* (*Photololigo duvaucelii* and *Sepia pharaonis*) were the major species in the fishery contributes to the catch. Total cephalopod production by all the gears, registered increasing trends



31.7% compared to 2019 (945 tons). Major contribution was by purse seine 64% and squids dominated the fishery forming 91.8%.

### District and species wise marine fish landing in Karnataka 2018-19 (in Lakh).



**Figure 6.** Marine fish landing in landings centres of Karnataka, 2020

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