

# Marine Fish Landings in India 2021



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# Marine Fish Landings in India 2021

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# Indian Marine Fisheries in 2021

## At a Glance

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1

The estimated marine fish landings from all the maritime states and two union territories in the mainland of India for the year 2021 was 3.05 million tonnes and it showed an increase of about 11.8% compared to the landings in 2020 (2.73 million tonnes), which was still less by 14.4% in comparison to the landings in 2019, the last of pre-pandemic years (3.56 million tonnes).

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2

Gujarat made it to the first position replacing Tamil Nadu, after a gap of two years, with 5.76 lakh tonnes accounting for 18.9% of the total landings in the country.

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3

Major marine fishery resources in 2021 landings were Lesser sardines at 2.26 lakh tonnes (7.4% of the national total); Scads with 2.14 lakh tonnes (7.0%); Indian mackerel recorded 2.13 lakh tonnes (7.0%); Penaeid prawns clocked 1.68 lakh tonnes (5.5%); and Cephalopods reached 1.56 lakh tonnes (5.13%).

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4

The major gainers in the landings in comparison to last year were Scads, Non-penaeid prawns, and Threadfin breams. The same trend was observed when compared to 2019, with Non-penaeid prawns replaced by Lesser sardines.

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5

The landings of Indian Oil sardine (*Sardinella longiceps*) fell out of the top ten resources list, with only 0.87 lakh tonnes landed in 2021 (2.86% of the national total).

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6

The number of fishing trips in the mechanized sector showed a declining trend over the last decade and recorded the lowest in 2021 over the last three decades.

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7

The year 2021 witnessed a number of cyclonic storms in and around India, viz., *Taukte* and *Yaas* in May, *Gulab* in September, *Shaheen* in October and *Jawad* in December, which adversely affected the fishing days, apart from the reduction in the number of fishing days due to COVID-19 lockdown during the Delta wave.

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# India

The national-level sample survey, following stratified two-stage random sampling, implemented through Fish Catch Survey and Analysis (FCSA) online data collection application, was completed for the year 2021 and the collected data pertaining to more than 2 lakh units landed was processed for deriving species-wise, fishing gear-wise and fishing zone-wise monthly marine fish landings estimates. Further, the estimates were consolidated to get state-wise and national level estimates of marine fish landings for 2021.

The estimated marine fish landings along the coast of the mainland of India during 2021 was 3.05 million tonnes, showed an increase of about 11.8% compared to the landings in 2020, the year in which there was a decline in landings mainly because of loss in fishing days due to COVID-19

## Marine Fish Landings in India 2021

**3.05** million tonnes

**2.73**

Gujarat

**5.76 / 5.32**

Daman & Diu

**0.67 / 0.39**

Maharashtra

**1.23 / 1.40**

Goa

**0.52 / 0.57**

Karnataka

**5.51 / 3.75**

Kerala

**5.55 / 3.61**

West Bengal

**1.37 / 2.60**

Odisha

**1.80 / 1.75**

Andhra Pradesh

**2.07 / 1.94**

Puducherry

**0.38 / 0.34**

Tamil Nadu

**5.62 / 5.59**

Landings in lakh tonnes

■ 2021

■ 2020

## Estimated marine fish landings (tonnes) in India 2021

PELAGIC FINFISH		DEMERSAL FINFISH	
CLUPEOIDS		ELASMOBRANCHS	
Wolf herring	18797	Sharks	13127
Oil sardine	87195	Skates/Guitarfish	1826
Lesser sardines	225529	Rays	16324
Hilsa shad	8107	Eels	15047
Other shads	22234	Catfishes	56015
Anchovies		Lizard Fishes	81982
Coilia	30137	PERCHES	
Setipinna	6983	Rock cods	49714
Stolephorus	58501	Snappers	9574
Thryssa	41820	Pig-face breams	15049
Other clupeids	57377	Threadfin breams	145446
Bombayduck	68721	Bullseyes	31117
Half Beaks&Full Beaks	5964	Other perches	57845
Flying Fishes	407	Goatfishes	21731
Ribbon Fishes	141299	Threadfins	6420
CARANGIDS		Croakers	101287
Horse Mackerel	42873	Silverbellies	64922
Scads	214444	Whitefish	6665
Leather-jackets	13346	POMFRETS	
Other carangids	160561	Black pomfret	19321
MACKERELS		Silver pomfret	16802
Indian mackerel	212593	Chinese pomfret	6405
Other mackerels	1858	FLAT FISHES	
SEER FISHES		Halibut	776
<i>Scomberomorus commerson</i>	25808	Flounders	434
<i>Scomberomorus guttatus</i>	10623	Soles	29215
<i>Scomberomorus lineolatus</i>	4	CRUSTACEA	
<i>Acanthocybium solandri</i>	375	Penaeid prawns	168243
TUNNIES		Non-penaeid prawns	155926
<i>Euthynnus affinis</i>	27853	Lobsters	1215
<i>Auxis</i>	8767	Crabs	38760
<i>Katsuwonus pelamis</i>	18387	Stomatopods	6701
<i>Thunnus tonggol</i>	1707	MOLLUSCA	
<i>Thunnus albacares</i>	21088	Bivalves	6917
Other tunnies	877	Gastropods	1360
Bill Fishes	10912	CEPHALOPODS	
Barracudas	37749	Squids	75577
Mulletts	7678	Cuttlefish	68138
Unicorn Cod	13	Octopus	12743
OTHERS			
<i>Odonus niger</i>	24158		
MISCELLANEOUS	130116		
<b>TOTAL</b>		<b>3047485</b>	

Production of resources that are harvested by localized effort

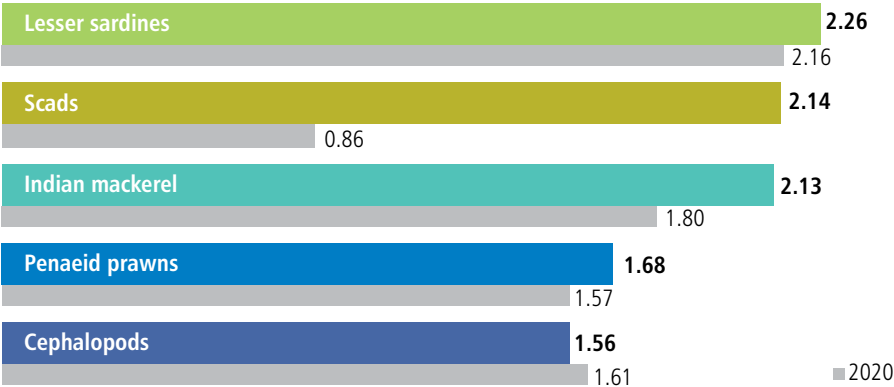
Seaweed	33345	Mussels, Oysters & Clams	97075
<b>TOTAL</b>		<b>3177905</b>	

pandemic related closure of the fishery. Compared to 2019, the normal fishery year, the landings in 2021 was 14.4% less.

States with maximum landings in 2021 are Gujarat (5.76 lakh tonnes), Tamil Nadu (5.62 lakh tonnes), Kerala (5.55 lakh tonnes) and Karnataka (5.51 lakh tonnes), contributing to 18.9%, 18.5%, 18.2% and 18.1% respectively towards the national total. Compared to the landings in 2019, there was a 76.3% increase in Odisha landings, 57% increase in Goa, 9.9% increase in Karnataka, 3.8% increase in Puducherry and 2.0% increase in Kerala. The maritime states with a reduction in landings in 2021 compared to 2019 were West Bengal (45.0%), Daman & Diu (40.3%), Maharashtra (38.9%), Tamil Nadu (27.4%), Gujarat (23.1%) and Andhra Pradesh (20.3%).

In 2021, the maximum landings was in the southwest region with 1.16 million tonnes (38.0%), followed by 0.81 million tonnes (26.5%) in the southeast region, 0.77 million tonnes (25.1%) in the northwest region and 0.32 million tonnes (10.4%) the northeast region.

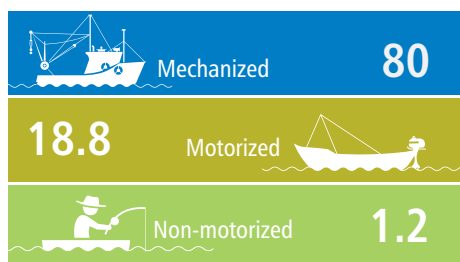
Marine fishery resources with the highest landings contribution in 2021 were Lesser sardines 2.26 lakh tonnes (7.4% of the national total), Scads 2.14 lakh tonnes (7.0%), Indian mackerel 2.13 lakh tonnes (7.0%), Penaeid prawns 1.68 lakh tonnes (5.5%), Cephalopods 1.56 lakh tonnes (5.13%), Non-penaeid prawns 1.56 lakh tonnes (5.1%), Threadfin breams 1.45 lakh tonnes (4.8%), Ribbonfishes 1.41 lakh tonnes (4.6%), Anchovies 1.37 lakh tonnes (4.5%) and Croakers 1.01 lakh tonnes (3.3%).



Major five species/groups with their contribution (lakh tonnes) towards total marine fish landings in India (2020 & 2021)

tonnes (7.0%), Penaeid prawns 1.68 lakh tonnes (5.5%), Cephalopods 1.56 lakh tonnes (5.13%), Non-penaeid prawns 1.56 lakh tonnes (5.1%), Threadfin breams 1.45 lakh tonnes (4.8%), Ribbonfishes 1.41 lakh tonnes (4.6%), Anchovies 1.37 lakh tonnes (4.5%) and Croakers 1.01 lakh tonnes (3.3%). The Indian Oil sardine (*Sardinella longiceps*), which is an iconic resource, both quantity-wise as well as consumer preference-wise, moved to the 11th position with only 0.87 lakh tonnes landed in 2021 (2.86% of the national total). Hilsa, yet another unique resource, showed a declining trend compared to previous years.

Going by the bifurcation of estimated landings with respect to artisanal and non-artisanal modes of fishing in 2021, 2.44 million tonnes (80.0%) were attributed to mechanized fishing vessels, 0.57 million tonnes (18.8%) by motorized fishing crafts and only 0.04 million tonnes (1.2%) by non-



Sector-wise landings (%) India



Region-wise contribution (%)

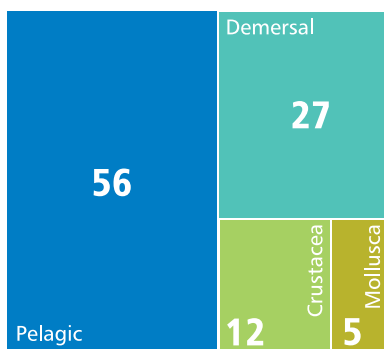
motorized fishing crafts.

In 2021, the overall catch rates of mechanized fishing vessels were 2,541 kg/trip and 70 kg/hour; for the motorized fishing vessels these were 150 kg/trip and 24 kg/hour; for the non-mechanized fishing vessels, these were 53 kg/trip and 26 kg/hour.

Among the mechanized fishing vessels, multi-day trawlers were found to have notched the highest per trip catch rate (5,027 kg) followed by mechanized purse seiners (3,579 kg) and per hour catch rates were high for vessels with mechanized seinenets

(461 kg). Outboard purseseine and outboard ringseine crafts were the two types in the outboard sector with high catch rates both in terms of fishing units and hours of fishing.

Fish bionomic grouping-wise contributions in the landings in 2021 were Pelagic 1.69 million tonnes (56%), Demersal 0.82 million tonnes (27%), Crustacea 0.37 million tonnes (12%) and Mollusca 0.16 million tonnes (5%). In 2020, the percentage contributions of these categories were 54, 29, 11 and 6 respectively.



Assemblage (%) India

Quarter-wise split-up of marine fish landings in 2021 revealed an apportioning of 0.83 million tonnes (27%) in the first quarter, 0.33 million tonnes (11%) in the second, 0.76 million tonnes (25%) in the third and 1.13 million tonnes (37%) in the fourth. The respective quarter-wise percentage contributions in 2020 were 31.3, 6.2, 22.4 and 40.1.



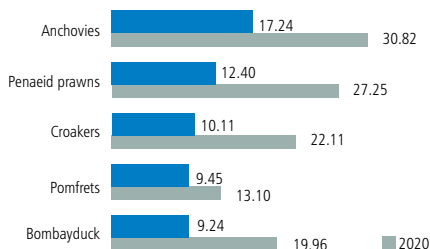
Quarter-wise landings (%) India



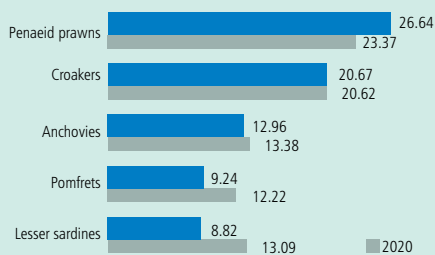
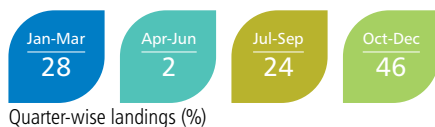
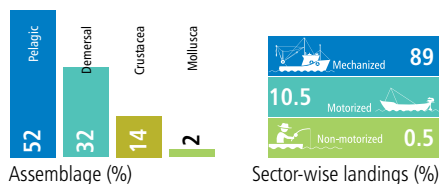
# West Bengal

Estimated Landings: **1.37** lakh tonnes

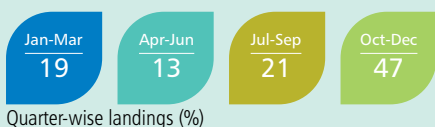
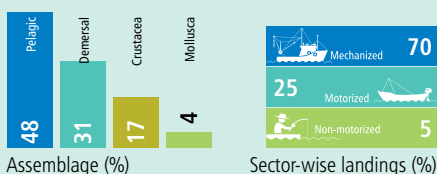
- ⦿ The year of 2021 was a less productive period for the state as the total yield was 1.37 lakh tonnes which was nearly half of the production of the previous year.
- ⦿ Unfavourable weather conditions continued to occur along the coast. Three cyclones had been formed where two of them lashed out the area during the peak fishing season of September to December.
- ⦿ The estimated fishing trips of mechanized craft was 47% less in South 24 Parganas district and provided only 36% of the total catch as the harbours in Kakkdip region were found to be with lesser fishing activities due to high fuel price, bad weather and poor catch.
- ⦿ The landings of Hilsa shad, a popular resource of the state continued the declining trend with a catch of 5372 tonnes which is the second lowest estimate in a decade.



Major Landings (in '000 tonnes)



Major Landings (in '000 tonnes)



# Odisha

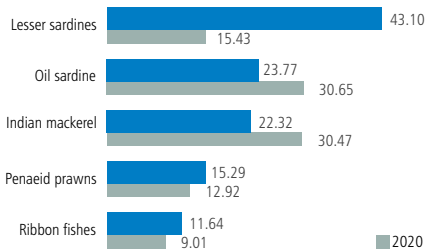
Estimated Landings: **1.80** lakh tonnes

- ⦿ Marine fish landings in Odisha was estimated at 1.80 lakh tonnes in 2021 as against 1.75 lakh tonnes in 2020, showed an increase of 3%.
- ⦿ The top three resources, Penaeid prawns, Croakers and Anchovies, accounted for one-third of Odisha's total marine fish landings.
- ⦿ A two-fold increase in landings of Indian mackerel and four-fold increase of Oil sardine was noticed compared to previous year.
- ⦿ Jagatsinghpur was the leading one among the six coastal districts in Odisha, accounting for 41% of the state's total marine fish landings. Balasore district ranked second with 26%.
- ⦿ Multi-day trawlnet contributed a major portion of the landings with 1.12 lakh tonnes, followed by outboard gillnets and mechanized gillnets.

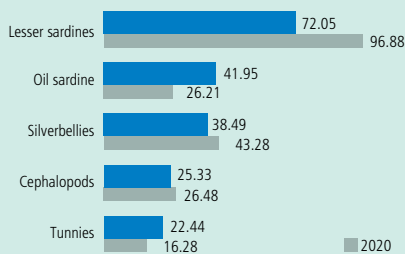
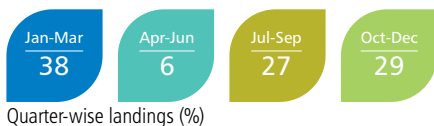
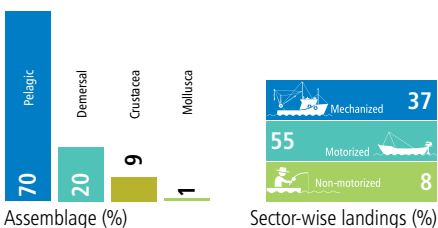
# Andhra Pradesh

Estimated Landings: **2.07** lakh tonnes

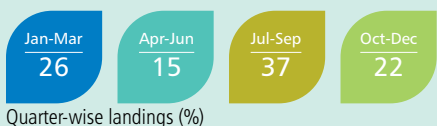
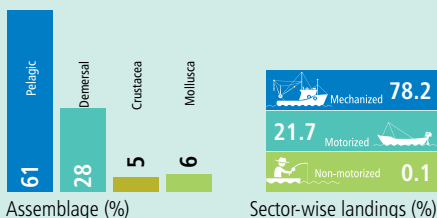
- ⦿ The total marine fish landings from Andhra Pradesh during the year 2021 was estimated to be 2.07 lakh tonnes which showed an increase of 6.2% when compared to 2020 and was yet to catch up with pre-pandemic years, falling short by 20% when compared to 2019.
- ⦿ Lesser sardines recorded the highest landing of 0.43 lakh tonnes in 2021, which was also at the top position in 2019, whereas in 2020, Oil sardine recorded the highest landing of 0.31 lakh tonnes. Among the states where landings of Oil sardine were prominently reported, the state ranked the second position next to Tamil Nadu.
- ⦿ East Godavari district retained the top position with 42% followed by Srikakulam (17%) among the nine coastal districts of Andhra Pradesh.
- ⦿ Fishing days were lost due to cyclonic warnings and the COVID-19 lockdown.



Major Landings (in '000 tonnes)



Major Landings (in '000 tonnes)



# Tamil Nadu

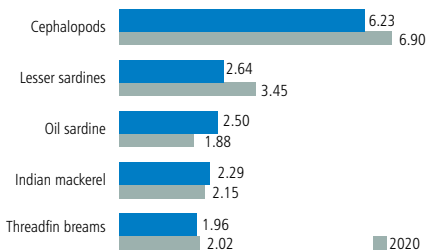
Estimated Landings: **5.62** lakh tonnes

- ⦿ The marine fish landings recorded from Tamil Nadu during the year 2021 was 5.62 lakh tonnes and the state stepped down to the second position when compared to previous years, 2020 and 2019. The contribution of Tamil Nadu to all India landings was 18%, while in the previous year, it was 21%.
- ⦿ It was the Lesser sardine that showed the highest landing of 0.72 lakh tonnes in 2021, the same as in 2020.
- ⦿ In addition to the COVID-19 lockdown, three cyclones and heavy rains hit the region during the peak fishing season from September to December.
- ⦿ The district with high fishing potential, Ramanathapuram alone contributed 34% of the state's total landings.
- ⦿ The Oil sardine landings was 0.42 lakh tonnes, an increase by 60% from the previous year.

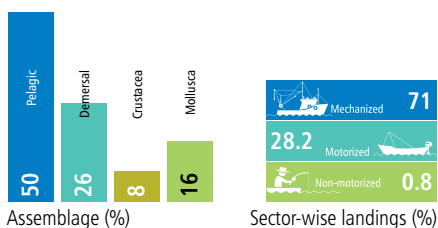
# Puducherry

Estimated Landings: **0.38** lakh tonnes

- ⦿ The estimated marine fish landings of Puducherry was 0.38 lakh tonnes during the year, with an increase of 13% when compared to the previous year with a contribution of 1.3 % to the national total.
- ⦿ The Oil sardine, Indian mackerel, Lizard fishes and Silverbellies landings considerably increased in the year 2021 when compared to the year 2020, whereas a reduction was observed in the case of Cephalopods and Lesser sardines.
- ⦿ Fishing days were lost due to three cyclones, of which two major ones lashed out the area during the peak fishing season of September to December, apart from COVID-19 lockdown.

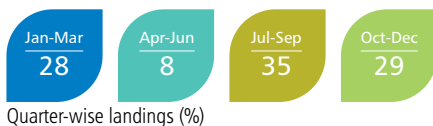


Major Landings (in '000 tonnes)



Assemblage (%)

Sector-wise landings (%)



Quarter-wise landings (%)

# Kerala

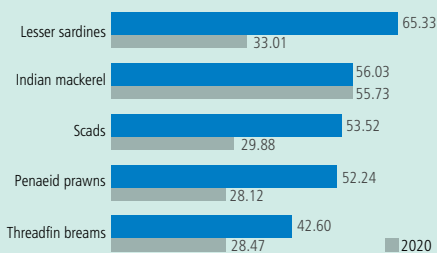
Estimated Landings: **5.55** lakh tonnes

- ⦿ Kerala recorded 5.55 lakh tonnes of marine fish landings during the year 2021 and showed a 54% increase when compared to the catch of the previous year. But as the previous year was affected by the losses of the pandemic, this increase can be seen as a revival of the fishery to its normal production before the pandemic.

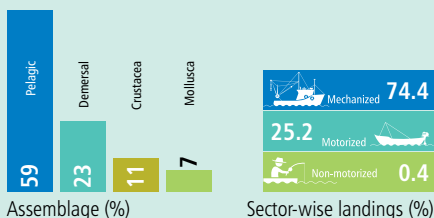
- ⦿ The year 2021 also witnessed the loss of many fishing days in the state due to the second wave of the pandemic during the months of May to July, cyclone formations and heavy rains.

- ⦿ Lesser sardine emerged as the most abundant resource in Kerala waters, with a record maximum catch of 0.65 lakh tonnes in the last six decades where *Sardinella gibbosa* was the prominent species in this group.

- ⦿ The species which was noted for its substantial absence was Oil sardine which recorded a catch of 3297 tonnes, which was the lowest since 1995.

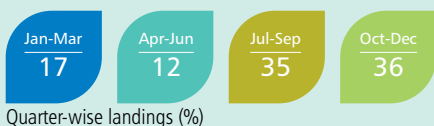


Major Landings (in '000 tonnes)



Assemblage (%)

Sector-wise landings (%)

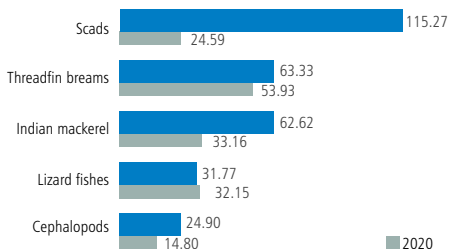


Quarter-wise landings (%)

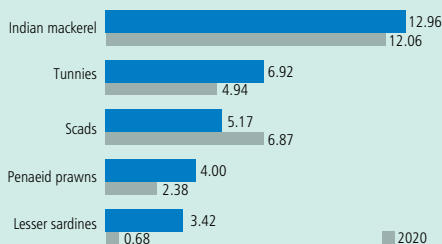
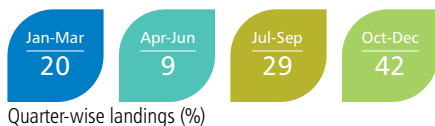
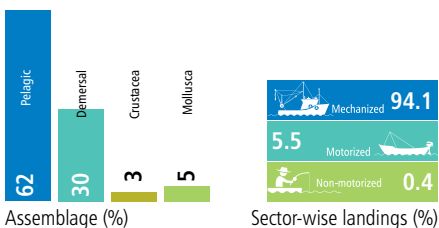
# Karnataka

Estimated Landings: **5.51** lakh tonnes

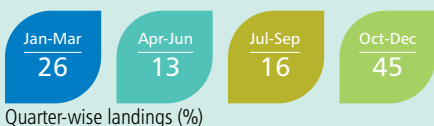
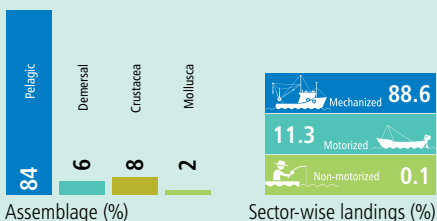
- ⦿ The state of Karnataka, with an estimated marine fish landings of 5.51 lakh tonnes, recorded an increase of 47% compared to the previous year though the increase was just 10% compared to the pre-pandemic year 2019.
- ⦿ The relaxations given for auction during the morning hours during the COVID lockdown period have reduced its impact on the landings. Increased operation of motorised units has increased the landings.
- ⦿ Loss of fishing days due to the cyclones during May and October also affected the fishing operations along the Karnataka coast.
- ⦿ Scads were the major resource, contributing nearly one-fifth of the total landings.
- ⦿ A significant increase in Pursesine catch was noted compared to the previous two years.



Major Landings (in '000 tonnes)



Major Landings (in '000 tonnes)



# Goa

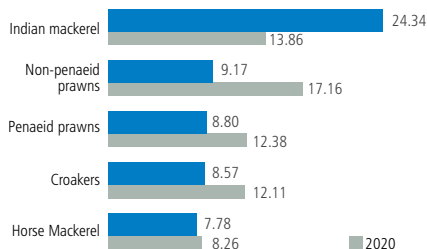
Estimated Landings: **0.52** lakh tonnes

- ⦿ The estimated marine landings of Goa was 0.52 lakh tonnes, with a decrease of 9.7% compared to the previous year.
- ⦿ The co-occurrence of COVID lockdown and monsoon fishing ban period reduced the impact of the COVID third wave on the fishery of the state. However, the fisheries suffered due to the cyclonic weather in May.
- ⦿ Apart from the cyclonic weather in the month of May, shortage of migrant labourers from the states of Odisha, Haryana, Chhattisgarh & Bihar coupled with less demand for fish reduced the fishing activity along the state.
- ⦿ Oil sardine landings increased from meagre 2 tonnes to 145 tonnes, indicating signs of recovery. Increased landings of Tunnies was observed compared to the last two years.
- ⦿ The contribution by the two districts was so lopsided that the South Goa district alone contributed 69% of the marine landings of the state.

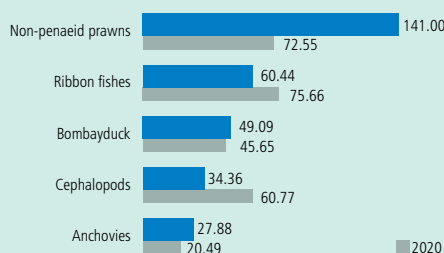
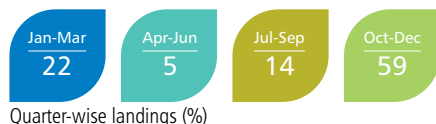
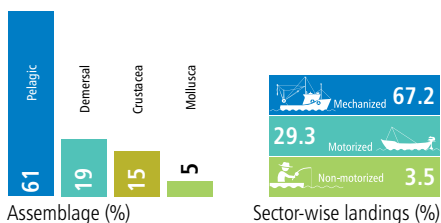
# Maharashtra

Estimated Landings: **1.23** lakh tonnes

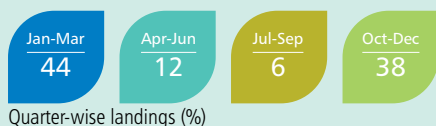
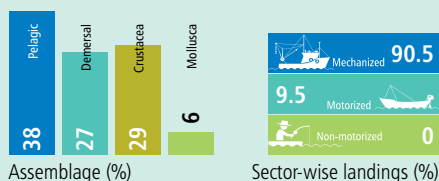
- Total estimated landings of the state of Maharashtra was 1.23 lakh tonnes which accounted for 4% of all India marine fish landings during the year 2021. There was a decline of 12% in landings compared to 2020.
- The district Mumbai City contributed 32% and showed the highest landing in Maharashtra, followed by Sindhudurg and Ratnagiri.
- A decrease in the landings of all major species was observed except for Indian mackerel and Scads.
- The major harbours notched 38% of the total catch in Maharashtra.
- Multi-day trawlnet contributed a major portion of the landings with 0.34 lakh tonnes in the state.



Major Landings (in '000 tonnes)



Major Landings (in '000 tonnes)



# Gujarat

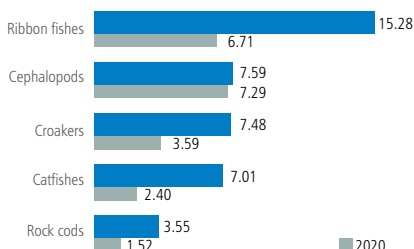
Estimated Landings: **5.76** lakh tonnes

- The estimated marine fish landings from Gujarat for 2021 was 5.76 lakh tonnes, recording a nearly 23% decrease compared to the 2019 landings.
- The decline was mainly due to the COVID-19 pandemic in addition to the erratic weather, which significantly impacted fishing efforts, movement of migratory fishers from other states, trade-related issues, etc.
- Major contributing resources in the marine fish landings in 2021 were Non-penaeid prawns (1.41 lakh tonnes) followed by Ribbon fishes (0.60 lakh tonnes).
- Gir Somnath district contributed the highest of 2.25 lakh tonnes in 2021, followed by Porbandar (1.11 lakh tonnes) and Junagadh (0.94 lakh tonnes).
- The major harbours viz., Veraval, Mangrol and Porbandar accounted for 49% of the total catch in Gujarat.

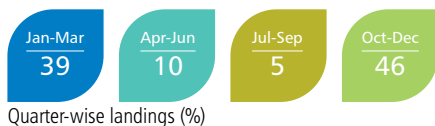
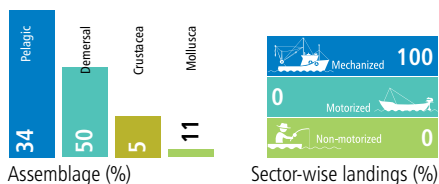
# Daman and Diu

Estimated Landings: **0.67** lakh tonnes

- Marine fish landings of Daman and Diu in 2021 showed an increase of 72% in comparison with the previous year, 2020 (0.39 lakh tonnes).
- The maximum catch was recorded during the fourth quarter, followed by the 1st quarter.
- Multi-day trawlnet contributed maximum landings of 63378 tonnes, followed by mechanized gillnet (2761 tonnes) and mechanized dolnet (504 tonnes).
- The harbours Vanakabara and Goghala recorded the major portion of the landings.



Major Landings (in '000 tonnes)

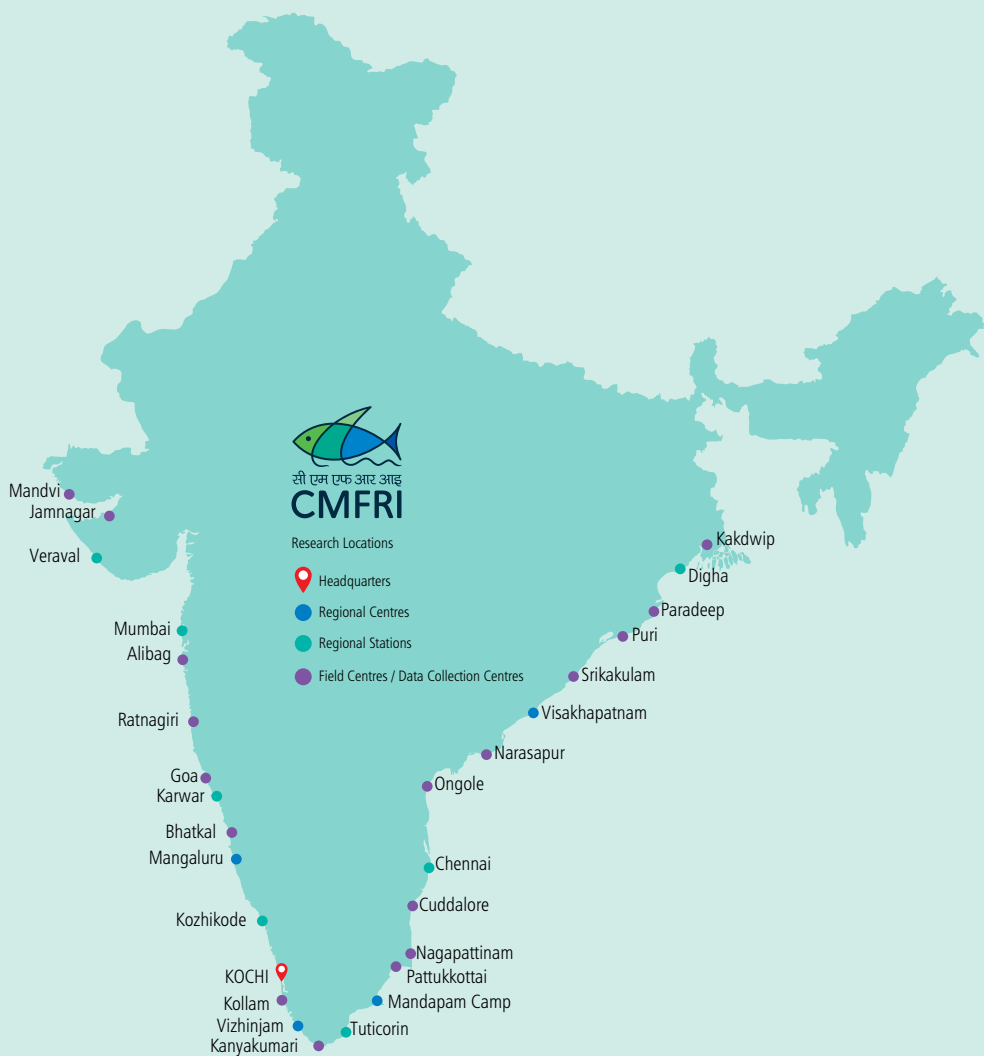


## Valuation of fish landings across states

The estimate of the value of marine fish landings during 2021 at landing centre level was ₹53648 crores, (14.24% increase over 2020) and at retail centre was ₹76640 crores (14.06 % increase over 2020). The unit price per kg of fish at landing centre was ₹176.04 (2.19 % increase over 2020) and at retail centre was ₹251.48 (2.03 % increase). The marketing efficiency was 70%.

State	Valuation (₹crores)					
	Landing Centre			Retail Centre		
	2020	2021	Share (%)	2020	2021	Share (%)
West Bengal	4,723	2,336	4.35	6,176	2,934	3.83
Odisha	2,784	3,084	5.75	4,560	4,274	5.58
Andhra Pradesh	2,675	2,808	5.23	4,345	4,048	5.28
Tamil Nadu	7,492	7,908	14.74	12,667	15,179	19.81
Puducherry	786	594	1.11	1,104	815	1.06
Kerala	7,714	11,639	21.70	10,215	14,304	18.66
Karnataka	5,547	10,253	19.11	7,171	12,685	16.55
Goa	1,162	1,139	2.12	1,471	1,301	1.70
Maharashtra	4,164	2,625	4.89	5,428	3,317	4.33
Gujarat	9,285	10,138	18.90	13,159	16,138	21.06
Daman Diu	630	1,124	2.10	897	1644.6	2.15
<b>Total</b>	<b>46,962</b>	<b>53,648</b>	<b>100.00</b>	<b>67,194</b>	<b>76,640</b>	<b>100.00</b>

# Data Collection Centres of CMFRI





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