

Status of billfish fishery along the Indian coast

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Abstract

The landings of billfishes along the Indian coast showing an increasing trend since the 1990s and the estimated landings during 2019 was reported to be 14759 tonnes. In India, five species *Istiophorus platypterus*, *Kajikia audax*, *Istiompax indica*, *Makaira nigricans* and *Xiphias gladius* are reported regularly while rare landings of *Tetrapturus angustirostris* are also recorded. The average annual billfish landings during 2012-2019 in different maritime states indicates that Kerala (4942.9 t) leads followed by Tamil Nadu 3386.8 t, Andhra Pradesh 2215.3 t, Gujarat 944.5 t, Maharashtra 277.8 t and so on. Mechanised gillnetter forms the chief craft and gear operated for billfish resources. *I. platypterus* dominated among the billfish species landed during all the years followed by *I. indica*, *X. gladius*, *M. nigricans* and *K. audax*. The fishes commanded rate of ₹100 per kg for *I. platypterus*, 120-140 for *X. gladius* and 160-200 for Marlin.

Keywords: Billfish, fishery trends, India.

Billfishes contributing substantially to the total large pelagics landings in India although it does not constitute a targeted fishery and occurs as the bycatch in longlines, troll and oceanic drift gillnet fisheries. Billfishes reported commonly along the Indian coast are *Istiophorus platypterus* (Indo-Pacific Sail fish), *Kajikia audax* (Striped marlin), *Istiompax*

indica (Black marlin), *Makaira nigricans* (Blue marlin) and *Xiphias gladius* (Sword fish). Rare landings of *T. angustirostris* was also reported. The landings of billfishes along the Indian coast are showing an increasing trend (Fig.1).

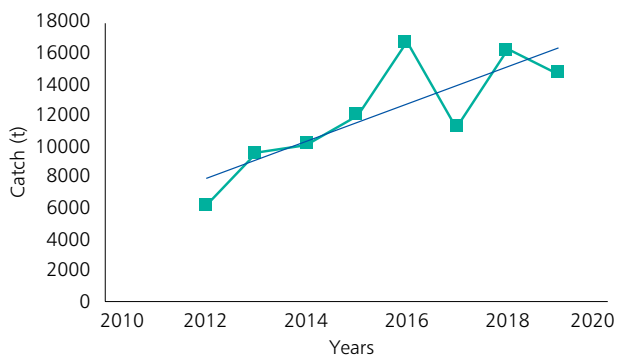


Fig.1. Trend of billfish landings in India (2012-2019)

Total billfish landings in different maritime states during 2012-2019 indicates contribution of Kerala (41%), Tamil Nadu (28%), Andhra Pradesh (18%), Gujarat (8%) and Maharashtra (2%), with only meagre landings in other maritime states and union territories (Fig.2). The annual state-wise billfish landings of India from 2012-2019 indicated Kerala topped during most of the years followed by Tamil Nadu, Andhra Pradesh, Gujarat and Maharashtra (Fig.3).

The major crafts and gears chiefly employed in billfish harvest during the 2012- 2019 period was Mechanised Gillnetter (MGN-29238 t), Mechanised others (MOTHS-

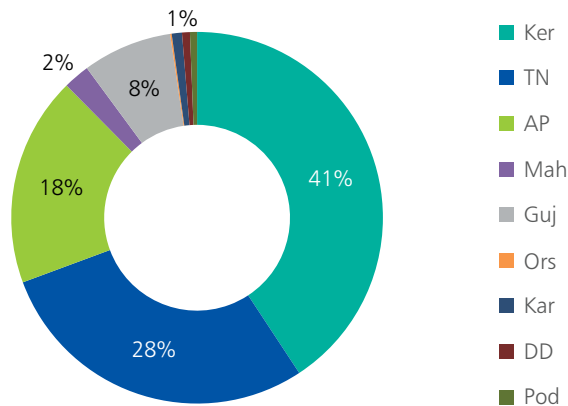


Fig.2. Percentage contribution of different maritime states and Union territories in annual total billfish landings from 2012-2019

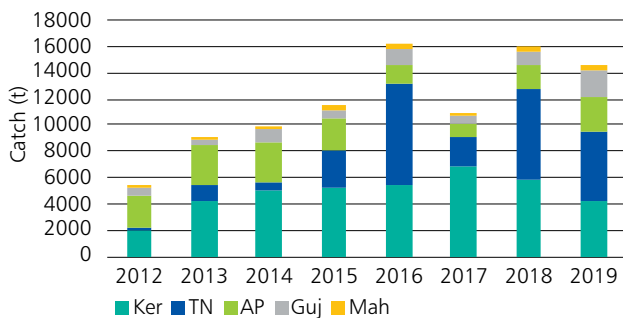


Fig.3. Annual contribution of various maritime states to billfish landings (t) along Indian coast (2012-2019)

23239 t), Out board Gillnetter (OBGN- 14947t), Out board Hook and Line (15928 t), Multiday Trawlner (MDTN- 5659 t), Mechanised Hook and line (MHL- 3287 t), Out board others (OBOTHS- 2379 t), Mechanised Gillnetter cum Hook and line (MGNHL- 1992 t), Mechanised trawl (MTN- 1650 t), Non-motorised crafts (NM- 1271 t),

Multiday trawler cum hook and line (MDTNHL- 329 t), Mechanised Purseseine (MPS- 307 t), Mechanised Ringseine (MRS- 0.8 t) and Mechanised Dolnetter (MDOL- 12.16t). Fishermen opine operating gillnets for billfishes is more profitable than line fishing. The species composition in the catch was *I.platypterus*, *M.nigricans*, *I.indica*, *Xiphias gladius*, *Thunnus albacares* and *Katsuwonus pelamis*. Bigger sized billfishes were caught in gillnets and a blue marlin weighing 400 kg landed in September 2020 was auctioned at the rate of ₹49500. They can operate lines only when the water is clear and billfishes and shark are landed with the chances of getting tunas being rare. The gillnet catch fetches more profit due to the different species that are commonly caught in this gear.

The billfish landings by different gears in different maritime states and union territories during 2012-19 indicate MGN, OBGN, MGNHL, MHL, MDTN, OBHL and MOTHS are the major gears (Table 1). *I.platypterus* formed the major species landed by all the gears during the reporting period.

The major species landed along the Indian coast during 2012-2019 were *Istiophorus platypterus*, *Istiompax indica*, *Makaira nigricans*, *Xiphias gladius* and *Kajikia audax*. *I.platypterus* dominated in all the years followed by *I.indica*, *X.gladius*, *M.nigricans* and *K.audax* (Fig.4).The maximum landing of *I.platypterus* was reported in Kerala in most of the years followed by Tamil Nadu, Andhra Pradesh, Gujarat and Maharashtra. The maximum annual landings of *I.indica* was from Andhra Pradesh followed by Kerala, Tamil Nadu, Karnataka and Maharashtra. Maximum landings of *M.nigricans* were observed in Tamil Nadu followed by Kerala, Andhra Pradesh, Gujarat, Maharashtra and West Bengal. For *X.gladius* maximum

Table 1. Average annual billfish landings by different gears in different states and union territories during 2012-2019.

State/Gears	Average annual landing of Billfishes (t) by different gears in different States and Union territories during 2012-2019												
	MDTN	MGN	MGNHL	MHL	MOTHS	MRS	MTN	NM	OBGN	OBHL	OBOTHS	MDTNHL	MPS
West Bengal	210												
Odisha	7	2							47	82			
Andhra Pradesh	188	695			2		1	93	5473	2124	152.7		
Tamil Nadu	2832	16727	119	263	3208		1635	36	1059	1567		320	
Puducherry	237	344					11						1.5
Kerala	64	5578	1835	2928	20016				4994	1935	2184	6.6	
Karnataka	292	140	36	1	11	0.800			296	3.7	43		35.4
Maharashtra	295	1911		58			1	0.46	257				271.6
Gujarat	1482	3433		35					2603	1.5			
Daman and Diu	45	404							215				

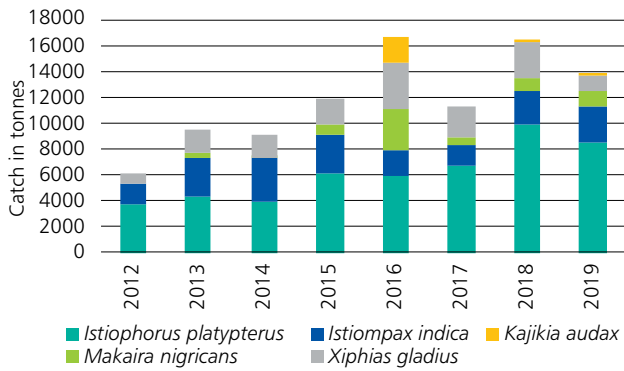


Fig.4. Annual species wise landings of billfishes along Indian coast

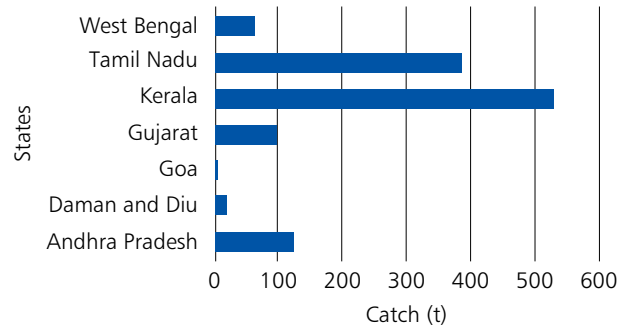


Fig.7. State-wise annual average landings (t) of *M.nigricans* (2012-2019)

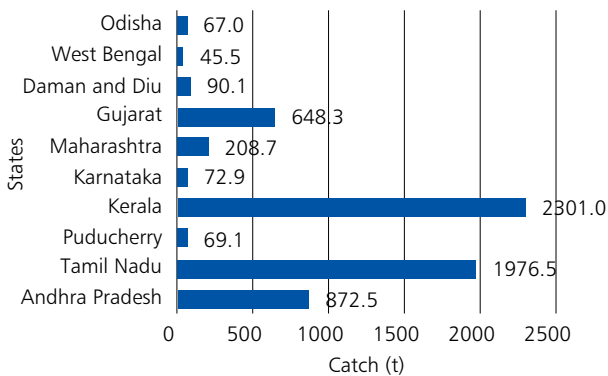


Fig.5. Annual average landings (t) of *I.platypterus* along maritime states of India (2012-19)

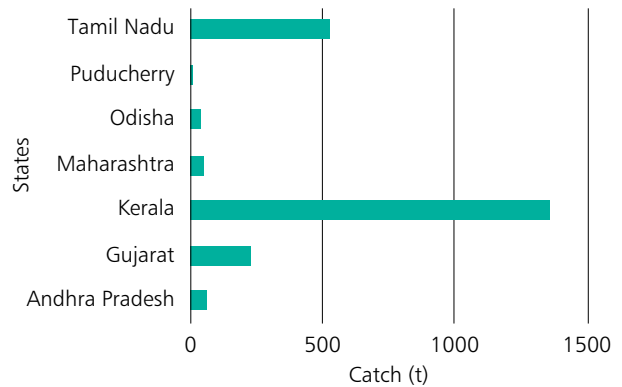


Fig.8. State-wise annual average landings (t) of *X.gladius* (2012-19)

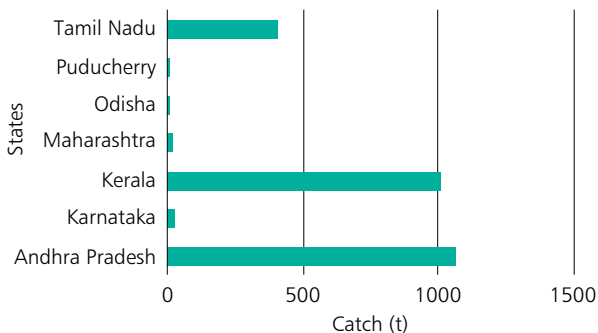


Fig.6. State-wise annual average landings of *I.indica* (2012-19)

annual landings were reported in Kerala followed by Tamil Nadu, Gujarat, Maharashtra and Andhra Pradesh. *K.audax* was reported from Tamil Nadu and Maharashtra in some years (Figs. 5-8).

The billfishes landed in Thoothoor – Kanyakumari region of Tamil Nadu, were processed at the fisheries harbour itself for easy transportation. The fishes were often auctioned at the rate of ₹100 per kg for *I. platypterus*, ₹120-140 per kg for *X. gladius* and ₹160-200 for marlins. With little demand in local markets, most of these processed fishes packed in plastic and thermocol containers with ice are transported to neighboring states, mainly Kerala. In fish markets of Kerala like in Thalassery, Aluva, Kottayam, Idukki, Changanassery these are sold at the rate of ₹200-350 per kg. The processing plants located at Kanyakumari send the fresh ice packed fishes to Kerala and the salt dried fishes to Tuticorin and Chennai, which is often exported to countries like Sri Lanka, Malaysia and Singapore.