

THE CATCH IS LINKED TO CLIMATE!

CMFRI, Which Studied Data On Catch Fluctuations Over The Past 60 Years, Found That After Each El Nino, Oil Sardine Catches Fell Here

Sudha.Nambudiri
@timesgroup.com

Kochi: The fluctuations in oil sardine landings can be connected to the El Nino phenomenon in Indian waters. After every El Nino year, there has been a drop in fish catch, despite environmental and exploitation factors, said a study conducted by the pelagic fisheries division of central marine fisheries research institute (CMFRI) titled 'Enigmatic Indian Oil Sardine'.

Oil sardines roughly account for 17-20% of the total marine fish landings. At the national level, it is the top ranked species in terms of 'landing volumes' in most years. Among marine fishes, its importance – as a favoured fish and rich source of fish oils – creates a unique position for oil sardine in terms of economic value. It is prone to sudden volume fluctuations that makes it an enigma to researchers and fishermen, said the study.

Sardines caught across the country have a different flavour and hence the taste varies across coastal states

If the catch peaked in 2012, the slump began after 2015. Fishermen and researchers added the fish has now become smaller. "It has always recovered every few years. As CMFRI develops fisheries management plans for maritime states, it has become important to record all aspects of this species. After the compilation of an annotated bibliography on oil sardine and a national-level stock assessment published in 1992, several changes have taken place in the distribution, utilization and marketing," said EM Abdussamad, principal scientist, CMFRI.

One of the changes noted was the link between catch and climate. On analyzing the data on catch fluctuations over the past 60 years, the study found a co-relation between the two. When India recorded a huge catch of 7.20 lakh tonnes of oil sardines in 2012, the figure in

Kerala – which incidentally was the largest producer and consumer of the fish – was 4 lakh tonnes. A gradual decrease was recorded in landings in the following years owing to the development of El Nino. The first sharp decline was around 46,000 tonnes in 2016 following a strong El Nino year in 2015. As the intensity of El Nino decreased, the catch increased in 2017. He said the catch in 2018 was low.

The climate prediction center of national oceanic and atmospheric administration – an international agency focusing on the conditions of oceans –

warned in December 2018 that El Nino is expected to strengthen in the coming seasons. World Meteorological Organization and India Meteorological Department have stated that 2019 may be warmer due to El Nino and global warming.

Interestingly, sardines caught across the country have a different flavour and hence the taste varies across coastal states. Kerala and Karnataka like their sardines fresh and even dry. But for the rest of India, sardines are fishmeal. They now send it to Kerala and Karnataka because of the fall in catch down south.

There are three variants of oil sardines. Variant one is the normal sardine. Variant two is leaner and abundant along the east coast. Variant three is bigger in size and comes from Oman and are caught off India's northwest coast. Since 2019 is expected to be an El Nino year, the study said that the biological cycle of this fish will be easily disturbed. "The impact of El Nino is more evident along Kerala's coast. Hence, fluctuation in catch is high along southwest coast," he added.



Illustration: Greenish

THE OIL SARDINE STORY

The pelagic division of central marine fisheries research institute recently conducted a special study titled 'Enigmatic Indian Oil Sardine' to know more about fish landings and the impact of climate on the same. Here are some facts about oil sardines

➤ Major single species in India that accounts for 17-20% of the total marine fish landings



➤ Favourite fish of fish oils

➤ Seen at a depth of up to 50m

➤ Small-sized fish forming medium to very large shoals within 25-30km from shore

CATCH FACTS



From 2000-2015: Oil sardines accounted for 14% of total marine fish landings (TMFL)

OVER THE YEARS

1962 - 32% of TMFL
1994 - 2% of TMFL

1985-2015- Avg annual landing of 1,61,960 tonnes

West Coast: 77% of all India landings

MEAL OPTION

In Kerala, sardines account for 30% of all fish consumed

Gujarat: Fishmeal production



THREE VARIANTS

Variant 1 | Normal oil sardine

Variant 2 | Leaner form, abundant across east coast

Variant 3 | Big ones coming from Oman that are caught off India's northwest coast

STATE AND VERNACULAR NAMES

Gujarat/Daman and Diu: Thari, Rudri

Maharashtra: Tari, Haid, Pedvey, Padwa, Washi, Tari

Andhra Pradesh: Noone Kavallu, Burra Kavallu

Odisha: Nona Kavala, Disco Kabala, Narikal, Nadiaphali, Nna Kavala

Kerala: Mathi, Chala, Neichala, Nallamathi

Goa: Tharni, Tharise TN & Puduichery;

Goa: Not preferred, mostly sold to K'taka & Kerala

Karnataka: Fresh and canned

Kerala: Fresh, dried and canned

West Bengal: Hurhuri



JIGISHU SARKAR

For Malayali families, 'mathi' is always special

Sudha.Nambudiri@timesgroup.com

Kochi: When fishing boats that went with great expectations returned with poor catches from 2015, there was a small panic in the fisherman community. Protested followed with regular memorandums and discussions with officials and politicians to resolve the situation. The demand to declare a 'famine' became more vociferous after cyclone Ockhi hit the state's coast in 2017.

The missing sardine then managed the unimaginable; a self-regu-

lation to not catch juveniles. In a sector where traditional and mechanized fishermen don't see eye to eye, they agreed. The goal was to bring back their favourite fish.

Coastal communities in Kerala and Karnataka have an emotional connect with sardines. In Kerala, while oil sardine is popularly called 'Kudumbaparthi' (provider for the family) as it sustained the livelihood of many coastal fishermen all throughout the year. In coastal Karnataka, it is called 'Bhootha' (Bhoon=earth, that=mother). In Karnataka, fishing with ram-

panti used to be a community-based activity with children and menfolk involved in the operation of this huge shore seine to catch shoal fishes, mostly sardines and mackerel.

Around 250 to 300 men would be engaged in the operation of a single shore seine. "Even in Kerala, the shore seine was used mainly to catch fish. As traditional fishermen, we could predict the likely catch and hence weddings or a huge purchase was based on this prediction. Now, they talk of El Nino and climate change, but our entire annual expenditure was highly

reliant on this fish catch," said general secretary of National Fishworkers' Forum T Peter; adding that developmental projects along the coast have destroyed the fish spawning zones and one cannot now predict the possible catch areas based on traditional knowledge alone.

"Sardines caught from the Periyar, right near its confluence with Arabian Sea, are the tastiest," said VI Mojeendran, a fisherman from Ernakulam. He said 'mathi' tastes different in Vizhinjam (Thiruvananthapuram), Neendakara (Kollam) and Kannur.