

# Fossilised chank fishery in Thoothukudi

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The Gulf of Mannar and Palk Bay region are the primary areas for the Sacred Chank (*Turbinella pyrum*) resource along the south-east coast of India. Skin divers sell the live chanks to merchants who sort them based on size and quality. The fossilised gastropod fishery of *T. pyrum* exploited off the Tuticorin was commenced in 2009. The existence of fossilised chank resources was accidentally identified by fishers during the deepening of Tuticorin

New harbour of V. O. Chidambaranar Port Trust (VOCPT) in Thoothukudi. Until 2013, exploitation of fossilized chanks was carried out by skin diving using sharp metal to find out the presence of chank which was time consuming. From 2014 onwards, the fishermen started using air compressor for locating and exploiting this resource more easily saving time.



Fossilised Chank shells harvested

Generally, fossilised chank beds are situated along with the live chank beds and any resourceful chank bed identified during random collections, are geo-tagged by GPS. The fishers continue the exploitation in the same area until sufficient fossilised chank are available for collection and thereafter move on in search of new beds. Tuticorin major harbour area, Vann tivu, Kaswari island, Lighthouse tivu, Nallathanni tivu, Pulipoondu, Patharai Kilathi Atompathu, Melaonpathu, Siluvai, Pullaveli, Mullukambi and Thollayirampaar areas have good white chank resources. Mechanised country boat, vallam (10–14 m length built with 15 -20 HP engine) are employed to tap the chank resources. Each craft is fitted with 15 hp locally designed air compressor, air storage tank, 2 filters and air hose arrangements generally used to inflate vehicle tires. The air stored in the storage tank passes through two filters and is supplied through the hose to aid diving. In each compressor unit nearly 6-10 numbers of 100 m lengthy hoses are connected which are used to extend the diving duration. 130 boats are involved in exploitation of white chank at Tuticorin coast. The fishing operation start at 6.00-6.30 hrs and generally, 6 divers and 4 helpers are involved as crew per trip. After reaching the ground, operations are carried out during 09.00 –15.00 hrs. During the first 2 hours of operation, the divers carried out exploitation

of dead sacred chanks by digging the ground up to 2 m using a pair of scrappers attached to their legs. The divers onboard the boat and take rest for 2 hour prior to dive again for the period of 1.5 to 2 hours. The least depth of exploitation site may be 4 fathom and the average depth of operation is between 8 and 12 fathom. The operation between the depth of 10 and 15 fathom are considered very risky. Younger divers are able to stay in the water for up to 4 hours and have started night fishing during 7 pm to 5 am to avoid competition. The average cost per trip varies from ₹3000 to ₹5000 which includes fuel and food. The trip expense is based on the craft engine power and number of persons onboard. The income is mainly based on age, as lower age group divers are able to exploit more numbers of chank compared to the elders. The average daily income is ₹5000 for the 18-35 age group fishers, ₹3500 for 35-45 age group and ₹1500 for 45-55 age group. The emoluments of ₹1-5 lakhs to divers and ₹10,000-20,000 for helpers is being paid by the boat owners based on their skills to retain the crew members for regular chank fishing.

A fluctuating trend of the chank caught ranged from 200–329 t during 2013 -2020 with the estimated average annual catch of 251 t. The exploitation is dominated

by 80-100 mm size group (50%) followed by 100-130 mm size group accounts (25%), 65–80 mm size group represents (20%) and rest to above 130 mm sized chanks. Price of the chank is fixed based on its quality and size. Nearly 50 middle men are involved in the white chank trading from Tuticorin District. Emoluments as an advance are being paid by middleman to the vallam owners or daily share to the buyers (₹5-10 /chank of middle and large size). At present, majority of the collected chanks are transported to Kolkata directly by local chank trader.

Fishers of the age group of 16–55 are involved in fossilized chank exploitation. 24 divers (20-25 age group: 20 persons

& 50+ age group: 4 persons) have reportedly succumbed due to the pressure in lungs and heart through compressor aided diving for fossilized chank exploitation. Although experienced skin divers are not facing much problem inexperienced divers are facing problems. In 2014, a modified equipment for SCUBA diving was introduced to chank collectors, but still the divers prefer locally customised compressors due to less operational timings and cost, even though this apparatus is available at 75% subsidised price. Although the State fisheries department has provided 2 numbers of scuba diving equipment to every chank fishers' society, the divers are demanding 3 numbers of free scuba diving equipment per diver with subsidy for filling of oxygen.