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Popular Article

Indigenous fishing crafts and gears of Telangana, India

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Abstract

The present popular article was conducted to study different types of craft and gears used by local fisher folk within the five selected stations in 360 km stretch of River Krishna in the state of Telangana. Five types of fishing crafts and four gears were identified from the region and their dimensions vary from place to place. The crafts were Coracle, Fibre glass boat, Plastic cans, Thermocol raft, and Rubber tube platform. The gears were Gill net, caste net, hook and line and box trap.

Keywords: Fishing craft, Gear, Krishna River, Telangana.

1.Introduction

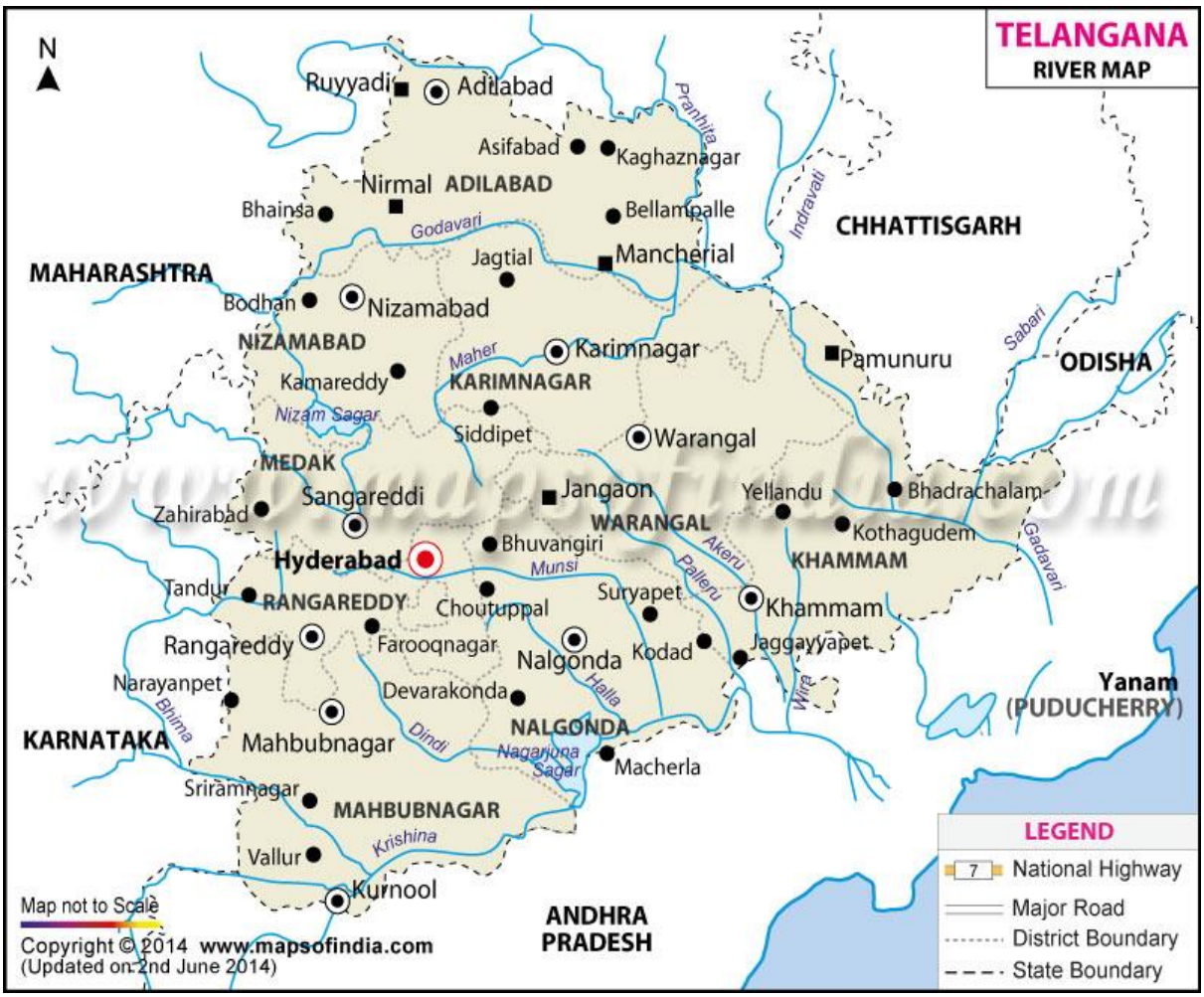
The Krishna is one of the longest rivers of India and flows about 1400 km in length. It originates at Mahabhaleswar in Maharashtra, flows through the states of Maharashtra, Karnataka, Telangana and Andhra Pradesh and meets the sea in the Bay of Bengal at Hamsaladivi in Andhra Pradesh (A.P) [1]. The river Krishna enters in Jogulamba Gadwall district of Telangana state and flows an approximately an area of 360 Km at 17°30' N latitude and 78°30' E longitude and ends at 15°44'06"N latitude and 80°55'12" E longitude play an important role in ecology and fishery of the state, which are being used for various purposes like fish culture, drinking, irrigation etc. It is largely impounded by number of dams and barrages along its course [2].

The major tributaries of Krishna River that flows through telangana are the Bhīma, Tungabhadra, and Musi. The other minor tributaries are Dindi, Paleru, Akeru, Munneru. In terms of present-day districts Krishna River basin is spread over - vikarabad, Rangareddy, Hyderabad, Rangareddy (shamshabad), Medchal, Narayanpet, Palamuru, Wanaparthy, Jogulambagadwal, Nagarkurnool, Yadadri, Nalgonda, Suryapet, Janagama, Warangal rural, Manukota, Khammam

districts and inaddition few parts in each of Warangal urban, Bhupalaapally and few small southern parts of Sangareddy district.

It was well described the different types of fishing gears were employed along Behar district of West Bengal [3], Bhopal District of Madhya Pradesh [4], Nalbari district of Assam[5] traditional fishing crafts and gears used by the nicobari tribes in car Nicobar [6], tribes of Gujarat on Tapti river[7] and crafts and gears used along Mahanadi[8] and Wainganga river of Maharashtra[9]. However, limited work has been done on craft & gears of Krishna River of Telangana state.

Therefore, the present study is aimed to document different types of craft and gear used in Krishna river of Telangana.



Reference has taken from www.mapsofindia.com website

2.Material and Methods

The present study was undertaken to document the craft and gear operated in River Krishna. Keeping in view the nature and requirement of data for the study, exploratory survey

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research design was considered most appropriate and was used with necessary operational modifications. The study was conducted for a period of March 2024 to Feb 2025.

Five sampling stations of state were selected randomly for the purpose of collecting data for the study. Namely Vadapally (A), Mahabubnagar (B), Gundimalla (C), Wanaparthy (D), Khammam (E) situated along the river and its tributaries along the state. The data were collected by personal visit to the different landing sites. Actual visit of different selected sampling station was done on monthly basis and the data collection with the help of semi structured interview schedule (Exploratory research survey) was made to collect data mentioning different points like, local name, materials used, person(s) involved in operation, mesh size, method of operation, season of operation, cost, life periods, type of species caught etc. The measurements of crafts and gears were taken out in the field and recorded accordingly.

3.Results and Discussion

3.1. Inland Fishing Crafts

Fishing refers to catching fish and other aquatic animals; it is an age-old profession with an extended history since time immemorial. Fishing gears and nets are devices of different shapes and sizes used to capture aquatic animals of various sizes in water bodies. Fishing gear can be operated from shore as well as crafts. Any floating structure can be considered a fishing craft if we use fishing gears from such floating devices. Fishing crafts provide the platform for fishing gear operations and storage of harvested fish. Every water body has unique craft and gear combinations to suit the fishing requirements in the area of operation [8]. It may be a simple wooden piece, inflated hide or a raft made of few banana stems to some improvised vessels.

Knowledge of fishing methods, gear, and crafts is an essential prerequisite for enabling scientific exploitation and sustainable management of fishery resources [9]. Artisanal fishermen operating simple gears may not require any craft as they operate the gear along the shore. The nature of inland fishing crafts varies from place to place and it mainly depends on the geographical and hydrological features of the region. Over the years, traditional fishing gears and practices have undergone many changes; fishermen attempted modifications in fishing gear design and methods of operation all along with the fishing sector. Though such structural transformations help to enhance catch per unit effort, many of them negatively affect the environment, biodiversity, and sustainability in the form of incidental catches of juveniles and non-targeted species. Fishing crafts and gears used in India are mostly primitive and non-mechanized [10].

Various types of materials are used to make these fishing gears include netting, twine, plastic structural and fasteners, clips and swivels, ropes, steel wire ropes, combination wire

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ropes, purse rings, polyester, polyethylene, nylon, cotton, polypropylene, mixed fibers, floats and sinkers, bamboo, wood etc [11].

India is rich with inland freshwater fish, with about 940 species known from its rivers, lakes and estuaries. This constitutes about 38% of the Indian Ichthyofauna and is of considerable economic and scientific value. Of these, about 166 species are available in Telangana state. Many of these are unique to certain stretches of the rivers. However, threats to these fauna are aplenty, with urbanization, deforestation, habitat loss, pollution, over-harvesting, and culture of exotics. Telangana is situated on the Deccan Plateau, in the central stretch of the eastern seaboard of the Indian Peninsula. The region is drained by two important major rivers, the Godavari and the Krishna. Telangana is also drained by several minor rivers such as Bhima, Maner, Manjira and Musi. It is well described the fish biodiversity of Telangana state [12].

Five types of fishing crafts were identified from the region and their dimensions vary from place to place. The craft were Coracle, Fibre glass boat, Plastic cans, Thermocol raft, and Rubber tube platform.

3.2. Coracle

The coracle is a small, lightweight, rounded boat traditionally used by fishermen for both fishing and transportation. In Telangana, it is locally referred to as 'Kyle' (circular) figure 1. These boats are predominantly used by migratory fishermen across all the rivers in the region. A modified version of the coracle is made using galvanized plates. The internal diameter typically ranges from 2 to 3 meters, with an inner depth of approximately 0.5 meters. Coracles are simple, inexpensive, and highly durable, offering excellent mobility across various types of water. Their versatility allows them to be used not only for navigation and transporting fish and materials but also for the laying and lifting of nets. Weighing between 10 and 15 kg, coracles are light enough for two fishermen to easily carry. Similar to other canoes, oars are used to propel the boat. Coracles were widely used in the reservoirs of South India, such as Tungabhadra (Karnataka), Mettur (Tamil Nadu), and Nagarjuna Sagar (Andhra Pradesh) [17]. According to Sreekrishna and Shenoy, the main features of a coracle include its large, wide-mouthed, circular, flat-bottomed shape. The mouth typically measures around 4 meters in diameter, while the bottom is smaller. A hide is securely fastened to the outside of the boat to prevent water from entering, and it is used primarily for operating gill nets, shore seines, and longlines [6]. The coracle, a saucer-shaped traditional craft, has been one of the key fishing boats in the fisheries of peninsular India [18]. To make a modified version of the coracle, High-Density Polypropylene (HDPP) sheets are wrapped around a split bamboo frame, with coal tar applied as an external coating. This version has an internal diameter ranging from 2 to 3 meters and a depth of around 0.5 meters. This

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adaptation of the coracle is more affordable and durable compared to the traditional one, which was originally made from expensive leather.

3.3. Fibre Glass Boat

It was the most frequently used fishing craft across various stretches of the river (Fig:2). Fishing was exclusively carried out using non-mechanized boats. The length of these boats ranged from 3 to 5 meters, with a breadth of 1 to 1.5 meters. No motorized crafts were seen, either for fishing or for transporting fish. According to researchers, tin boats are constructed using tin sheets, which are shaped into the form of a boat, with the edges reinforced by locally available wooden planks [19]. A wooden keel is attached beneath the sheet, and internal wooden ribs are arranged for support. These boats typically measure between 12 to 15 feet in length, 4 to 5 feet in width, and 2 to 3 feet in depth. They are operated using oars. The authors noted that gill nets, cast nets, traps, and lines are commonly used with this type of boat [17].

The plank-built canoe, on the other hand, is (i) constructed with planks sewn together using coir ropes, (ii) propelled by split bamboo oars or sails, and (iii) used in pairs for operating boat seines or individually for gill nets and longlines. Manna et al. observed that fishing boats in the Krishna River region typically range from 8 to 10 meters in length and 1 to 1.5 meters in width [17].

3.4. Thermocol raft

In the upper stretch, particularly near the confluence of Vadapally and Mahabubnagar, fishermen were observed using an improvised raft made from thermocol for gill net operations. Slices of thermocol were tied together with rope to form bundles, each measuring 0.4 to 0.5 meters in length and 0.2 to 0.3 meters in diameter. Two such bundles were secured with rope, providing a platform for fishermen to sit on while fishing (Fig: 3). This thermocol raft was also used during drag net operations. A similar technique was reported in another study [18].

3.5. Plastic Cans

For floating while fishing, fishermen used empty oil cans or regular plastic cans with a 5-10 liter capacity. Two cans were tied together with a piece of rope or cloth, maintaining a distance of about 1 foot between them (Fig: 4). During fishing, the cans were positioned between the fisherman's legs, one in front and the other in the back. With the upper part of the body remaining above water, this setup allowed fishermen to operate the net and paddle a short distance. No previous reports have mentioned the use of plastic cans as fishing crafts, so the findings of the current study cannot be directly compared to earlier research.

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3.6. Rubber tube platform

In certain stretches of the river, fishermen were observed using another type of improvised material, demonstrating significant creativity in crafting makeshift platforms from discarded old rubber tubes (Fig: 5). A wooden platform, covering an area of 1 square meter, was placed on top of the rubber tubes and securely tied with rope. This setup was primarily seen in the Jogulambagadwal district, where it was used for hook and line operations, as well as for setting and hauling gill nets. Similar observations of rubber tube platforms were reported by Manna et al. [18].

In the present study 5 types of crafts were encountered in Telangana. But, Manna *et al.* have reported total 6 numbers of craft as they have studied entire stretch of Krishna river [6].

3.7. Inland Fishing Gear

The fishing gears used by fish farmers in Telangana are simple and practical. Local fishermen typically rely on basic tools for commercial fish catches. Most of these gears are traditional or indigenous, and during the river survey, four different types of gear were observed. Fishing gears can generally be categorized into two types: active and passive. Active gears depend on the movement of the gear itself, while passive gears rely on the movement of the fish. Passive gears were traditionally used to maximize fish harvests from the Krishna River.

The traditional methods of fishing in this region range from simple techniques like hand-picking to more advanced practices such as gill netting using modern netting materials like Nylon Polyamide monofilament and Polyethylene twisted monofilament. Additionally, cast nets, fishing lines, and various types of traps are also commonly used.

3.8. Gill Nets

The gill net, locally known as 'Jali', is typically made with mesh sizes of 25 mm, 45 mm, 55 mm, 65 mm, 75 mm, and larger, which were recorded for mesh selectivity studies in these districts. The operation of the gill net primarily takes place at night. Fishermen set the gear in the evening and haul it up early in the morning. Monofilament is used in the construction of the gill nets. To ensure flotation, thermocol and wooden sticks are attached, while 1,500 to 2,000 sinkers are used to help the net sink (Fig: 6 and 7). The gill nets typically measure 400 to 500 feet in length and 15 to 20 feet in height.

According to Manna et al., various mesh sizes were observed in the gill nets used in the Krishna River [18]. Mesh sizes ranging from 16 mm to 250 mm were recorded along the entire stretch of the river Krishna in the Mahabubnagar district [1]. During the monsoon, larger mesh size gill nets were typically used to catch brooder fish. Smaller mesh sizes (25-50 mm), made from monofilament, were

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primarily used to catch smaller species. Gill nets with larger mesh sizes (50-160 mm) were mainly employed for capturing Indian Major Carps and Mystus spp., while nets with smaller mesh sizes (10-20 mm) were used to catch catfish, carps, and other species during the winter and summer months. The gill netting is very common fishing technique in shallow and moving water bodies of Tripura [20]. Selective types of gill net with different mesh size were found to be in operation in the study area. Gill nets are generally fixed against the flow of water with bamboo stakes and the catch is collected after 6-8 hrs. In Tripura gill net are widely used fishing gears during the rainy season especially in shallow moving water bodies. They are also known by various names like *fash jal, kanke jal chat jal* and current net. They are single walled nets with mesh size 2-12 cm (mostly 5.2-6.2 cm) and length of gear varies from 10-50 m depending upon the width and depth of water bodies. It has been observed that gill nets operated in the study area were mostly made up of polyamide monofilament. Head rope used with this gear is made of poly propylene. The small stones or gravels are used as sinkers. Gill net is usefully operated during the night time, from the evening to the next morning. After 4-6 hrs, fishes are collected from the net. Gill net locally called *Phansi jal* is commonly used to catch fishes by gilling. Fishes which try to pass through it get gilled. Mesh size of gill net various from 0.6-7.5 cm for different sized target fishes. It is wall netting, rectangular in shape and is provided with a head rope of polypropylene carrying floats and a foot rope with or without sinkers. Gill nets are made up of polyamide monofilament [3].

3.9. Cast Net.

The cast net, locally known as ‘fake jali,’ is one of the most commonly observed fishing gears used throughout the river. Typically made from Polyamide (PA) multifilament, these nets are primarily used to catch small fish. The length of the gear usually ranges from 2 to 4.5 meters. Once cast into the water and drawn in, the bottom of the net closes together under the weight of the lead, trapping the fish inside. The net is then hauled up, and the fish are emptied out. Cast nets are constructed with polypropylene (PP) ropes, typically ranging from 3.0 to 5.0 mm in diameter, with lengths varying from 6.0 to 8.0 meters. The mesh size ranges from 15 to 50 mm, and in most areas, the same mesh size is used from top to bottom. Thicker twines are used at both the top and bottom of the net. The cast net can be operated by a single person, as shown in Fig 8. The widespread use of the cast net throughout the river can be attributed to its simplicity and the fact that it can be operated single-handedly [18]. Different mesh and pocket sizes are often employed to target specific species. Similar observations were reported by Laxmappa and Bakshi, who noted the use of varying mesh and pocket sizes to target particular species. However, cast nets account for only 2-3 percent of the total catch in the Krishna River. Some fishermen operate this gear year-round in the river.

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Gumau jal or Bhanver jal, also known as the 'Cast net,' is typically used in shallow waters near the shoreline to catch small fish. The net is circular in shape, resembling an umbrella, with a strong rope attached to its apex. Weights made of iron or lead are attached along the margin of the net. The fisherman skillfully throws the net over the water from a boat, ensuring that the rope is held in one hand while the net expands fully on the water surface. In Cooch Behar district, the cast net, or Chhabi jal, is the primary fishing gear used [3]. This small bell-shaped net, with weights on its periphery and a string, operates on the principle of being thrown in a circle to trap fish. Cast nets are used throughout the year in rivers, beels, and ponds.

3.10. Hooks and lines

Long lines, commonly known as 'Davan,' are used across all districts (Fig: 8). The main line typically ranges from 200 to 800 meters in length and is made of either polypropylene (PP) twine with a diameter of 2 to 3 mm, or polyamide (PA) monofilament with a diameter of 1 to 1.2 mm. Long lines used for eel fishing are made with cotton twine, typically with a diameter of 1.5 to 2 mm. Branch lines, measuring 30-40 cm in length, are also made using either PP twine (2-3 mm in diameter) or PA monofilament (0.6 to 0.8 mm in diameter). The distance between the branch lines varies from 0.6 to 1.5 meters. Round barbed hooks, typically ranging from size 8 to 12, are used depending on the target species.

The hook and line method is widely used along the entire stretch of the Krishna River [3]. It is particularly prevalent at Satrasala, a deep pool with a depth of 16-18 meters, where higher water levels and reduced flow make it ideal for fishing. Fishermen use earthworms as live bait and snail flesh as dead bait to catch prawns and catfish from the river. This method is employed across the entire river stretch [19]. The fish typically caught range from 250 grams to 2 kilograms, although occasionally, fish weighing up to 10 kilograms or more are caught. Locally, this method is known as "Bansi" or "Kanta" [4].

In this fishing technique, a baited hook is used, and the gear is operated manually. A hand line typically consists of one or more hooks attached to the end of a cotton line (dori), with the other end tied to a long bamboo stick. Alternatively, an iron hook is often attached to the end of a nylon cord [3], and the line is fixed to the end of a bamboo pole. Additional components include a sinker to submerge the hook and a reel for casting the line. The hooks are baited with earthworms, beetle larvae, or small frogs. The hook and line method is used year-round and is also referred to as "Barshi" [20]. The nylon

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line is typically tied to the tip of a bamboo pole, with a length ranging from 1 to 3 meters. Small live bait is attached to the hook, and this method is specifically designed for catching riverine fish.

3.11. Box Trap

Box traps, locally known as 'Dalgi,' include various types of fishing traps, such as the box trap and the conical-shaped trap, which are among the minor fishing gears used in the Krishna River. The dimensions of the box trap are typically 2.25 x 1.75 x 1.75 feet and feature a one-way entrance slit on opposite sides, ensuring that once an organism enters, it cannot escape (Fig: 9 and 10). The slits close automatically after the organism enters. These traps are inexpensive and constructed from locally available bamboo sticks. Manna et al. observed that the box trap was one of the primary gears used for prawn fishing in the Krishna River [18]. The box trap is cube-shaped, made from bamboo sticks woven with durable creepers, and the sticks are generally thinner, knitted with nylon rope. The trap is placed vertically under the water, facing the water current, and a thermocol float is tied to it.

Another type of trap is the "Tapai," a rectangular fish trap made from bamboo sticks interwoven with nylon threads [3]. The size of the Tapai varies depending on the need, with the standard dimensions ranging from 0.5 meters to 1.5 meters in length, 0.30 meters to 0.40 meters in width, and 0.10 meters to 0.2 meters in height. This trap has two sides, each with 2 to 7 doors. The doors are designed as one-way valves, preventing fish from escaping once they enter. The diameter of the doors is 0.25 meters, allowing for the capture of larger fish.

The "Anta" trap is a rectangular box-shaped trap made from bamboo, wire mesh, or iron or polyethylene strips [20]. It has a small opening that opens only from the inside due to water pressure. Earthworms and a mixture of rice bran and dry fish are placed inside to attract prawns. These traps are placed in series and made with bamboo sticks, typically positioned in the evening hours with the mouth facing the current.

The "Ghani" is a cylindrical fixed trap, slightly flattened at the bottom to remain stable on the Beel floor. The other end of the cylinder has a concave surface, leading into a narrow orifice. The mesh size typically ranges from 50-70 mm square. This trap is used for catching catfish and large fish, and it has a door at the top, which is emptied every 6-8 hours [5]. Throughout the entire stretch of the Krishna River, 10 different types of fishing gears, including these traps, were encountered [18], and they are used throughout the river [21].

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Fig.1. Coracle

Fig.2.Fibre Glass Boat

Fig.3. Thermocol Raft

Fig.4. Plastic Cans

Fig.5. Rubber Tube

Fig.6.Monofillment Gill Net

Fig.7.Parts of Gill Net: Gill Nets and Wooden Floaters

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Fig.8. Hook and lines

Fig.9.Outside Box Trap

Fig.10. Inner View Box Trap

4. Conclusion

The present study was undertaken to document different types of fishing craft and gears operating in Krishna River in Telangana, India. A total of five types of fishing crafts and four types of gears were identified in the region, with their dimensions varying across different locations. The study found that certain fishing gears have a negative impact on the river's ecology and fish populations. Therefore, it is crucial to develop ecosystem-based management strategies, involving inputs from government bodies, non-governmental organizations, and other stakeholders, with the goal of ensuring the sustainable use of the river's resources.

5. References

Laxmappa B, Bakshi R. Types of fishing gears operating and their impact on Krishna river fishery in Mahabubnagar district, T.S. India International Journal of Fisheries and Aquatic Studies. 2014; 2(1):30-41.

Anon. Maharashtra Water Resources Regulation Authority. Report on Public Consultaion. LEAD

Journal(Law, Environment and Development Journal). 2015

Das KR, Barat S. Fishing gears operated in lentic and lotic water bodies of Cooch Behar district, West Bengal, India. Indian Journal of Traditional Knowledge. 2014; 13(3):619-625.

Chourey P, Meena D, Varma A, Saxena G. Study on Fishing Craft and Gears of Bhopal District, Madhya Pradesh, India. International Journal of Theoretical & Applied Sciences. 2014; 6(2):65-67.

Chakravartty P, Sharma S. Different types of fishing gears used by the fishermen in Nalbari district of Assam. International Journal of Social Science & Interdisciplinary Research. 2013, 2(3).

Ahmed, S.K., Ravikumar, T., Krishnan, P. and Jeyakumar, S., 2013. Traditional fishing crafts and gears used by the Nicobari tribes in Car Nicobar.

Dhimmar, S.N., Lende, S.R., Vala, S.R., Mevada, J.N., Vasava, R.J., Vadher, D.R. and Gamit, S.A., 2023. Traditional fishing crafts and gears used by the tribal community in Tapi District of Gujarat, India.

Aneesa, K.A., Shibu, A.V., Chaithanya, E.R. and Aneykutty, J., 2023. Indigenous craft and gears used for crab fishery in Cochin estuary, Kerala, southwest coast of India. *Indian Journal of Traditional Knowledge (IJTK)*, *22*(4), pp.899-907.

Raju C S, Rao J C S, Rao K G & Simhachalam G, Fishing methods use of indigenous knowledge and traditional practices in fisheries management of Lake Kolleru, J Entomol Zool Stud, 4 (5) (2016) 37-44.

Khanna SS, Singh HR. A text book of Fish biology and Fisheries. Narendra Publishing House, Delhi, India. 2003, 524p.

Hameed MS, Boophendranath MR. Modern Fishing Gear Technology, Das Publishing House, Delhi. 2000, 186p.

Boopendranath, M.R., Meenakumari, B., Joseph, J., Sankar, T.V., Pravin, P. and Edwin, L., 2002. Riverine and reservoir fisheries of India. *Soc Fish Technol, Cochin*, *458*.

Bhakta, D., Manna, R.K., Meetei, W.A., Solanki, J.K. and Sah, R.K., 2016. Traditional fishing crafts and gears of Ukai reservoir, Gujarat, India. *International Journal of Fisheries and Aquatic Studies*, *4*(4), pp.142-145.

Sudheesan, D., Sajina, A.M., Samanta, S., Paul, S.K., Nag, S.K., Baitha, R. and Bhowmick, S., 2023. Fishing crafts and gears used along selected stretch of river mahanadi. *Fish. Technol.*, *60*(3), pp.173-180.

Wanjari, R.N., Shah, T.H., Telvekar, P., Ramteke, K.K., Dhanalakshmi, M. And Rashid, I., 2024. A Preliminary Study Of Fishing Crafts And Gears Operating Along The Wainganga

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Published 29 /06/2025

River Of Maharashtra State, India. *Journal of the Inland Fisheries Society of India*, *56*(2), pp.185-196.

Srivastava, A.K., Laxmappa, B., Rao, B.R. and Sailu, G., 2017. Fish Biodiversity of Telangana State. *Telangana State Biodiversity Board, Hyderabad, Telangana State, India, iv+ 52pp*.

Sreekrishna Y, Shenoy L. Fishing gear and craft technology. Directorate of Information and Publications of Agriculture Indian Council of Agricultural Research Krishi Anusandhan Bhavan New Delhi. 2001, 161-181.

Manna, Das RK, Archan K, Krishna R, Karthikeyan M, Singh DN. Fishing crafts and gear in river Krishna. Indian Journal of Traditional Knowledge. 2011; 10(3):491-497.

Rajeswari G, Raghu PR, Sreedhar U, Swamy KM. Studies on fishing Crafts and Gears in Tandava reservoir, Andhra Pradesh, India. International Research Journal of Biological Sciences. 2015; 1(3):16-24.

Upadhyay AD, Singh BK. Indigenous fishing devices in use of capture fishing in Tripura. Indian Journal of Traditional Knowledge. 2013; 12(1):149-156.

Laxmappa B, Bakshi R, Konakonda S. Impact study of Seine nets on Krishna river fishery in Mahabubnagar district, India International Journal of Research in Fisheries and Aquaculture. 2014; 4(4):171-174.