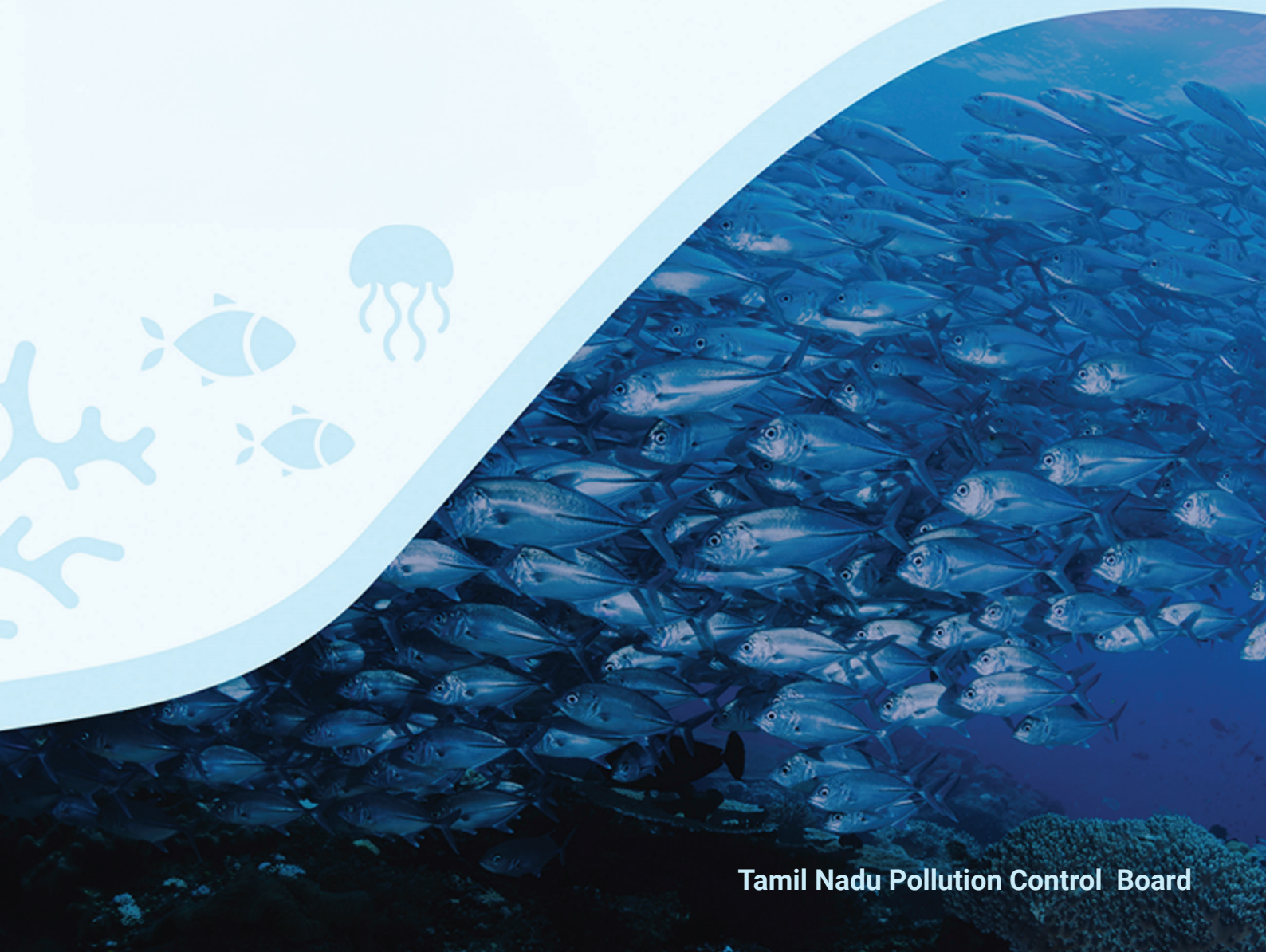




Tamil Nadu Fishnet Initiatives

To reduce marine litter from discarded fishnets





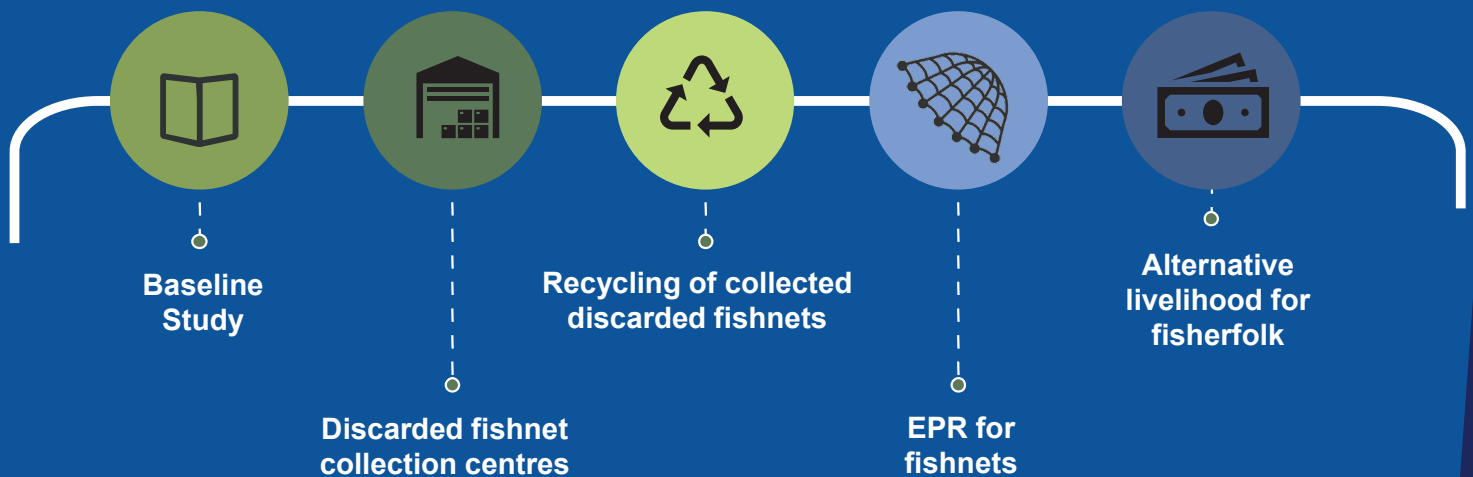
Background

Tamil Nadu, a southeastern state with a coastline stretching 1,076 km along the Bay of Bengal, is characterized by diverse coastal landforms such as sandy beaches, mangrove forests, estuaries, and coasts (Nazneen et al., 2022). These areas serve as critical habitats like coral reefs, seagrass meadows and wetlands for a wide array of plant and animal species (Ramesh et al., 2008). Tamil Nadu coast, however, is grappling with environmental challenges such as erosion, rising sea levels, high resource exploitation and pollution from various sources including rivers, agricultural runoff, sewage and industrial discharges, fishing activities, destructive fishing methods, shipping operations, and littering. The challenges outlined here pose potential threats to both the coastal environment and the associated biota.

The past few decades have seen the fishing industry increasingly rely on plastic in the form of nets, lines, ropes, traps and other fishing equipment, with plastic's lightness, durability, buoyancy and affordability making it an ideal resource. Abandoned, lost or otherwise discarded fishing gear (ALDFG) is considered to be a major contributor to marine plastic pollution and a cause of major ecological concerns like ghost fishing. Fishing equipment is often lost by accident, as rough weather conditions and worn gear cause the equipment to break while in use; or in illegal and unregulated fisheries, fishing vessels deliberately release their equipment into the environment. Moreover, fishing nets made of low quality material discarded after a season's use considerably contribute to marine plastic debris (Thomas et al., 2013). The share of ALDFG in global marine litter is about 10% by volume (Macfadyen et al., 2009). Once plastic is broken down to microplastic (size < 5 mm), it is increasingly difficult to identify the source of the plastic waste.

Tamil Nadu Fishnet Initiatives

Objectives



“

Recognizing the urgent need to address pressing environmental challenges, the **Honorable Minister for Environment, Forest & Climate Change Department** announced an allotment of Rs. 1 crore during the **2023-24 Legislative Assembly session for the Tamil Nadu Fishnet Initiatives (TNFI) project**. This unique and novel initiative aims to conserve marine biodiversity by actively involving the local community in the collection of used or discarded nets and other ocean-bound plastics. Through innovative approaches and community engagement, TNFI sets itself apart as a pioneering effort in marine conservation

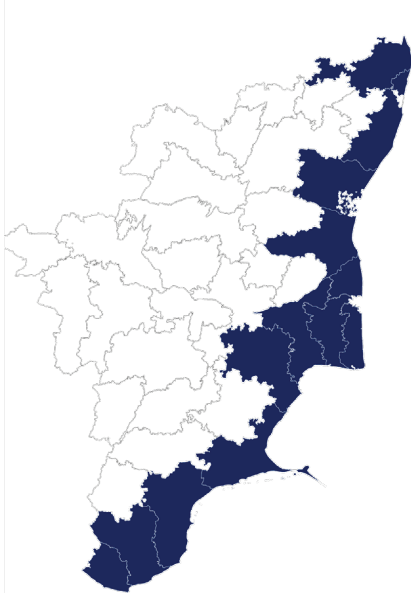
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The proposed centers are expected to establish a circular mechanism where discarded fishing nets are collected from fisherfolk at regular intervals and forwarded to stakeholders for recycling. These centers will also encourage budding entrepreneurs and research organizations to collaborate on innovative alternatives to plastic fishing nets. The project is anticipated to significantly reduce ocean-bound fishing nets, thereby conserving marine biodiversity and providing new opportunities for community involvement in environmental conservation.

Baseline Study on Marine Plastic Litter Along Coastline

Baseline study assessed the status of fishing-related marine plastic debris, focusing specifically on Abandoned, Lost or otherwise Discarded Fishing Gear (ALDFG or “discarded nets”)

Surveyed coastal districts



470
fisher folks interviewed

3,63,300 Sq.m
of total beach area studied across **52 villages**

1040 m of shoreline surveyed

Estimated **1,61,450**
no. of items with 6,466.95 kg of **ALDFG**



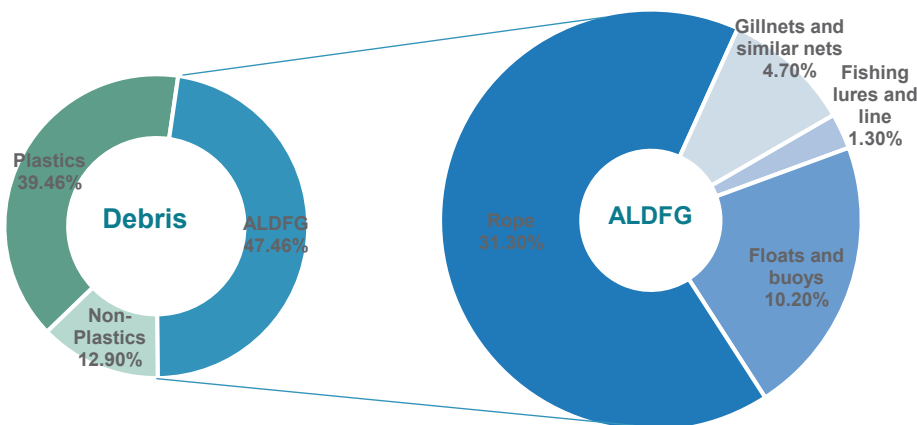
Baseline study

Across **52** fishing dominant villages covering the **13 coastal districts** along the coast of Tamil Nadu

Methodology

- Shoreline beached litter sampling
- Questionnaire survey on discarded nets utilizing the data sheet of FAO's global program for fishing gear loss assessment

Composition of debris



~48% of the debris consisted of ALDFG while **~39%** of the debris was Plastic waste

Of the 10 solid waste dumping sites identified nearby the sites 59.27% of litter was mainly domestic wastes, **23%** fishery by-catch wastes and the remaining 17.72% ALDFG.

Total of **65** fishing net production enterprises

Kanyakumari- 60
Chennai- 4
Coimbatore- 1

Tamil Nadu uses **6,000** tons/ year of fishnet locally

9,000 tons of fishnet exported

Tamil Nadu Establishes First Discarded Fishnet Collection Centre in Kasimedu



The Discarded Fishnet Collection Centre in Kasimedu Fishing harbour Chennai was inaugurated by the Hon'ble Chief Minister of Tamil Nadu on 14th August 2024.

Operational Overview of the Fishnet Collection and Recycling Process at Kasimedu



Under this program, fisherfolk are incentivized to hand over discarded fishnets at a rate of ₹40 per kilogram, with no deductions for inert materials or moisture content. This approach ensures fair compensation, providing an additional income stream while contributing to environmental sustainability.

M/s. Recity Networks Pvt. Ltd. has been appointed by the TNPCB as the official collection partner for discarded fishnets in Kasimedu. Recity has entered into a Memorandum of Understanding (MoU) with TNPCB to establish the requisite facilities, collect the discarded fishnets, offer incentives to fishermen, and transport the fishnets to M/s. Sun Polymers for recycling.

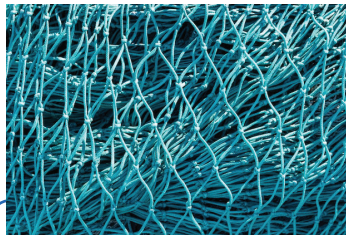


Transforming Discarded Fishnets from Waste to Utility Products

ALDFG is a major contributor to marine plastic pollution along Tamil Nadu's coastline, posing serious threats to marine ecosystems and biodiversity. The Discarded Fishnet Collection Centre has been established as a vital initiative to combat this issue by recovering and recycling fishing gear. Items collected at the center are carefully sorted and sent for recycling, ensuring they are diverted from marine environments and given a new purpose. The following materials are accepted at the collection center:



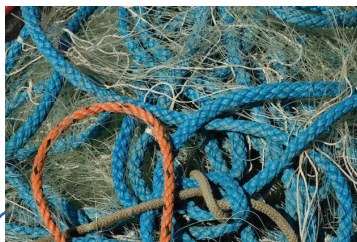
Nylon Fishnets



High-Density Polyethylene (HDPE) Fishnets



HDPE & Poly Vinyl Chloride (PVC) Floaters



PVC & Polypropylene (PP) Ropes

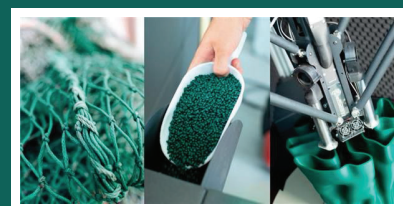


Polyethylene Terephthalate (PET)



Other HDPE, PVC & PP

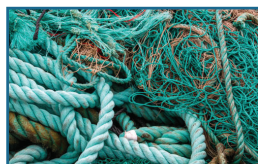
Collected discarded fishing nets and related products are recycled and processed into pellets or granules, which serve as raw materials for manufacturing a wide range of sustainable products.



Products can be made from Recycled Fishing Net Pellets/Granules



Textiles and Apparel



Industrial Materials



Construction Materials



Consumer Goods



Household Items

Empowering Fisherfolk



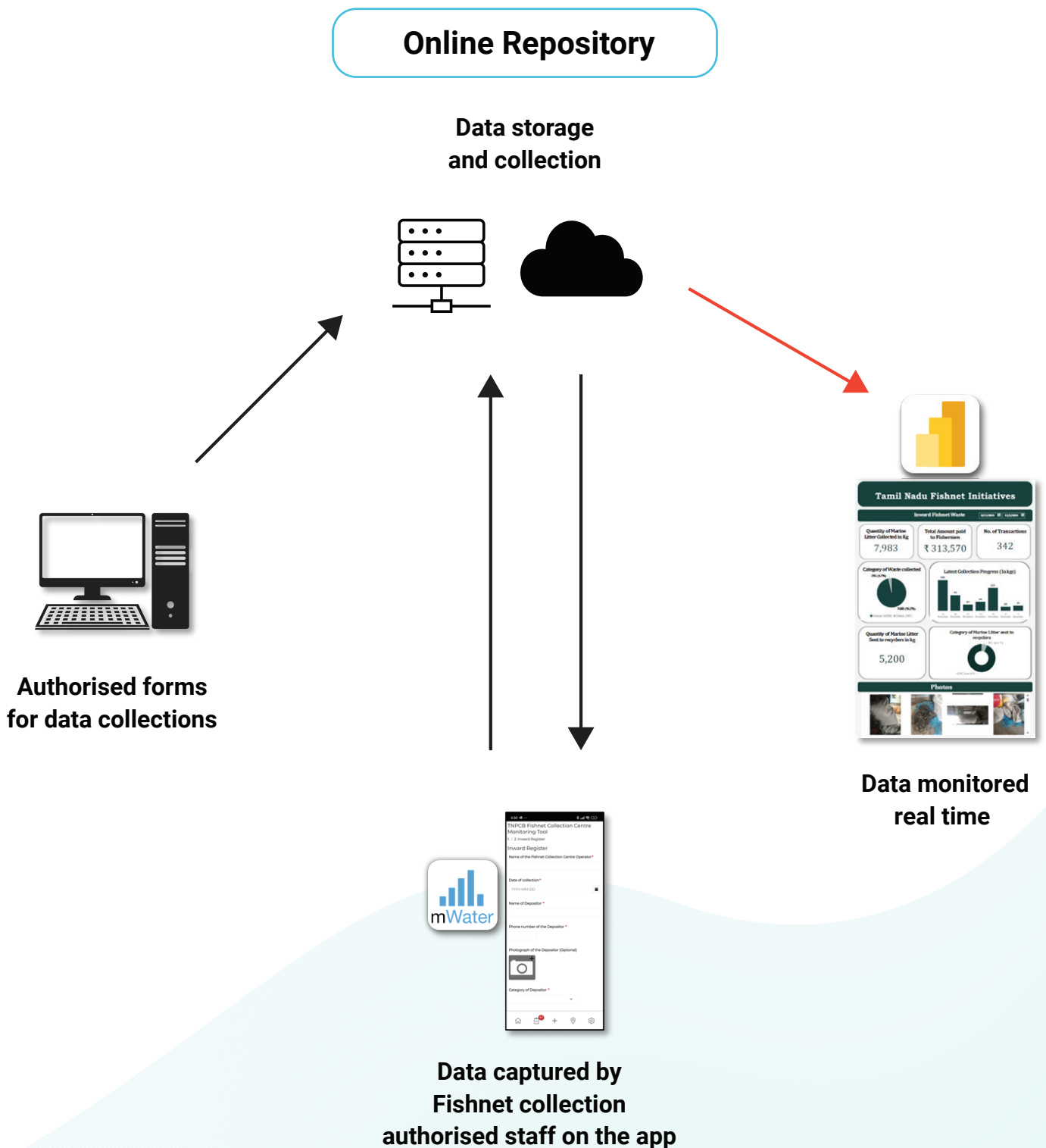
Empowering Fisherfolk to Combat Marine Debris and Protect Biodiversity



Awareness activities have been conducted to educate fisherfolk on the impacts of marine debris, such as plastics and discarded fishing gear, which threaten marine life and ecosystems. These efforts aim to empower the community to actively participate in reducing marine litter and safeguarding marine biodiversity.

Digital Interventions

The fishnet collection center operations have been revolutionized with digital interventions, ensuring transparency and accountability. Authorized forms are deployed via a mobile app to capture critical details, including fishermen information, collected quantities, waste sources, and transaction specifics. This data is securely stored in the cloud, processed, and analyzed in real-time through API-integrated Power BI dashboards, enabling data-driven insights and efficient monitoring



Tamil Nadu Fishnet Initiatives

Inward Fishnet Waste

17-08-2024



31-01-2025



Quantity of Marine Litter Collected in Kg

11,189

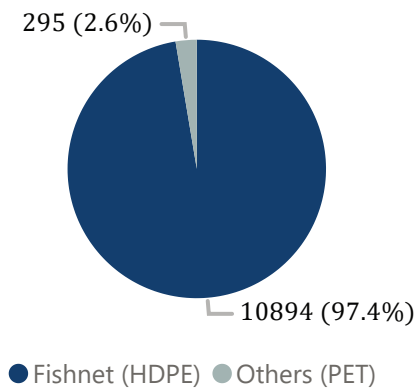
Total Amount paid to Fishermen

₹ 4,47,856

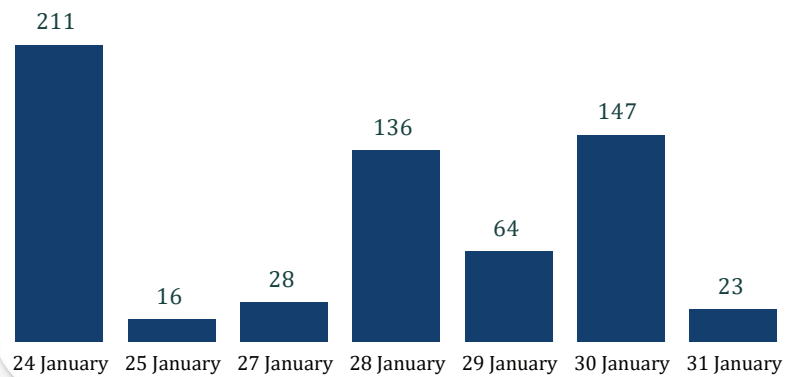
No. of Transactions

474

Category of Waste collected



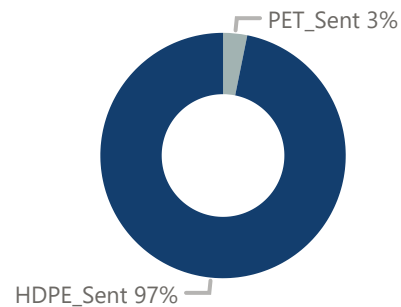
Latest Collection Progress (In kgs)



Quantity of Marine Litter Sent to recyclers in kg

10,710

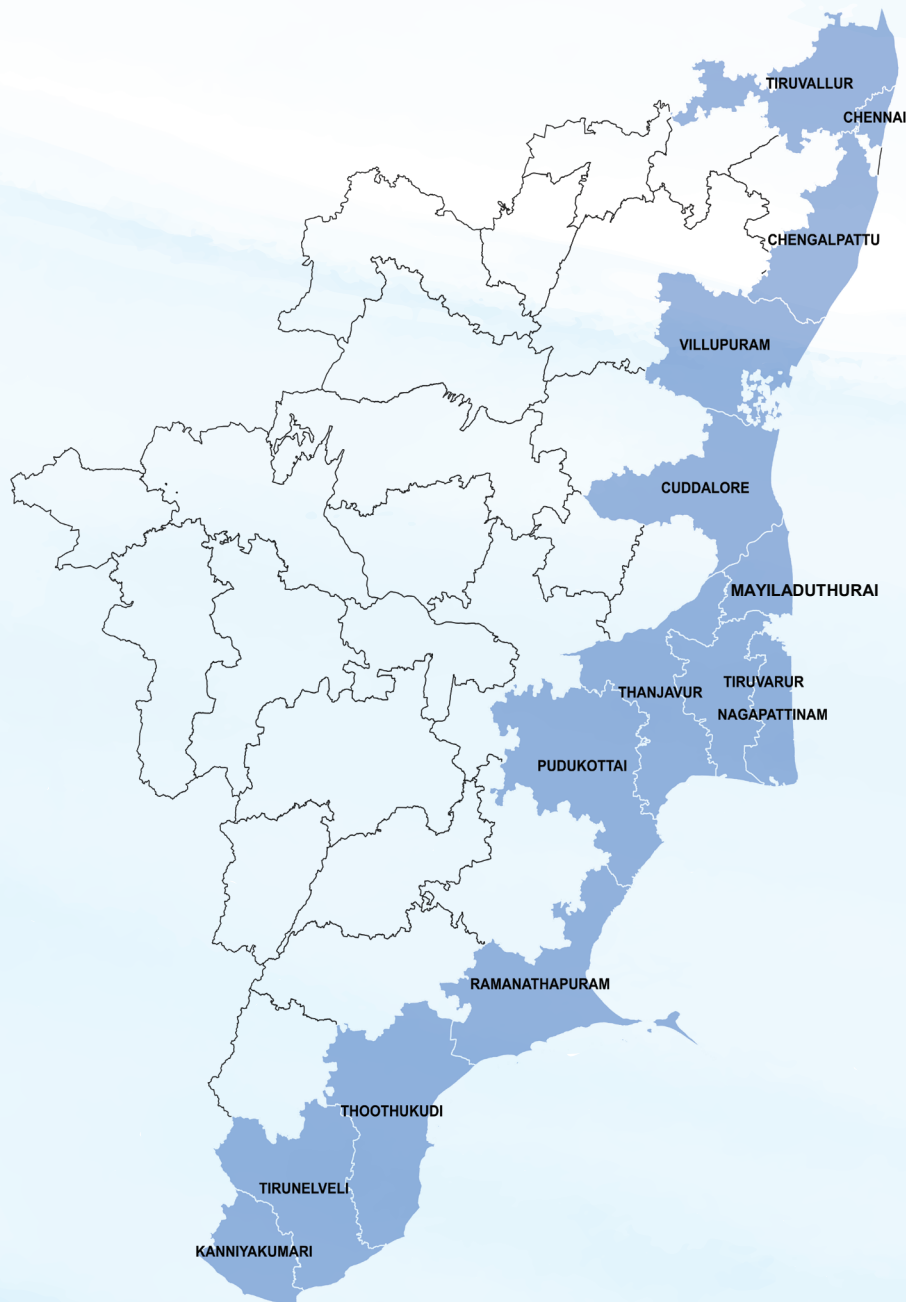
Category of Marine Litter sent to recyclers



Photos



Expansion of Fishnet Collection Centres in All Coastal Districts



Government of Tamil Nadu is expanding the Fishnet Initiatives Project across all 14 coastal districts to combat marine pollution and support local communities. This expansion will be carried out under the TN-SHORE project (Tamil Nadu State Coastal Habitat and Resources Environment Management), which focuses on sustainable coastal development, enhancing coastal ecosystem resilience, and improving livelihoods for coastal communities.

The second fishnet collection center is currently being set up at Kovalam, with land identified and approvals from stakeholders in progress.



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