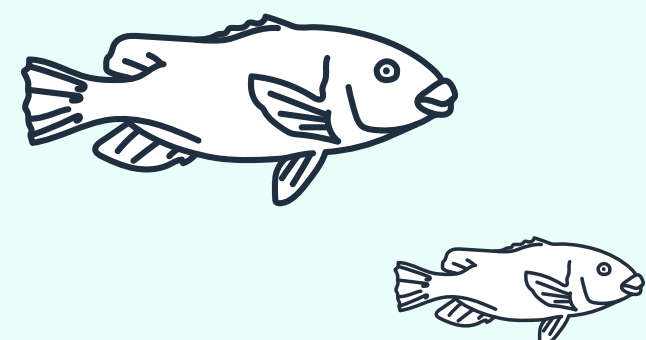


Combating ghost gear in the East Asian Seas

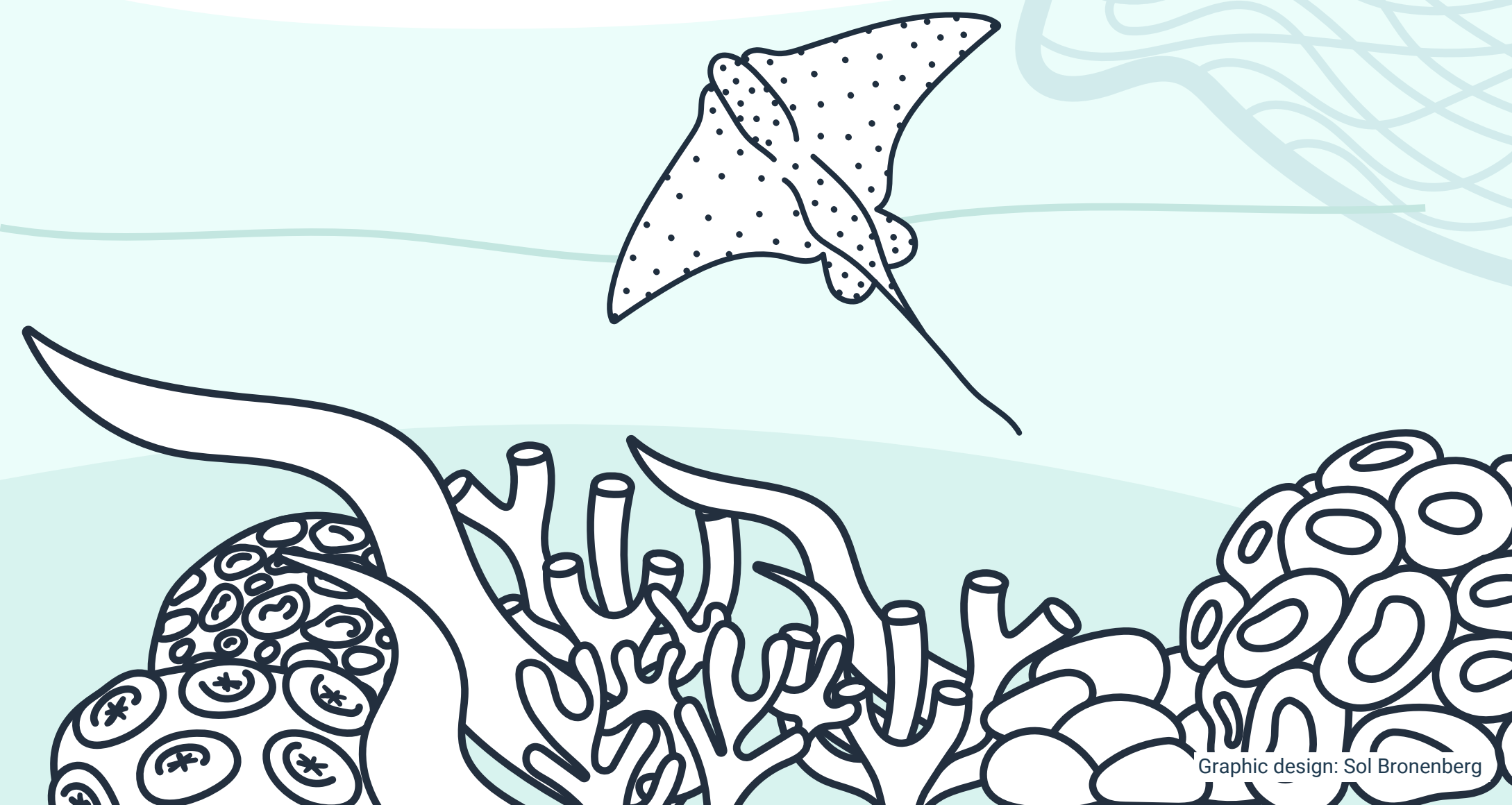
Case study series

SeaNet, Indonesia



Case overview:

TierraMar launched SeaNet Indonesia as a sustainable initiative aimed at improving the livelihoods of people in East Indonesia. This case study showcases one of the focus areas of the project: ghost gear recovery in local fishing communities in Merauke. SeaNet implemented the first fishing net recycling programme in Indonesia. The project utilized a community cooperative model that collected 18 tonnes of abandoned fishing nets over 18 months and sold them to be recycled into carpet tiles. This initiative has had a positive impact on both the fishing community and the environment in the region, strengthening sustainability and livelihoods.



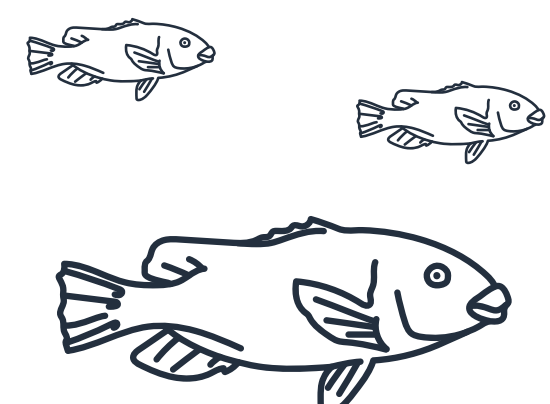
The situation in Merauke and the Arafura Sea:

The eastern Arafura Sea communities face significant financial challenges. People in Merauke, the capital of the South Papua province in Indonesia, face economic hardships and rely predominantly on fishery. The banning of fishing by foreign vessels in the Arafura Sea in 2014 has improved the financial situation and created new opportunities for domestic fishing vessels to enter the market. Despite limited fishing facilities, domestic production of fish, shark and maw in Merauke has steadily increased from 2.8 tonnes in 2015 to 132.1 tonnes in 2018. This trend highlights the need for sustainable practices in the fishing industry, including prevention of gear loss and proper disposal of nets.



Domestic production of fish maw has increased from 2.8 tonnes to

132.1 tonnes



¹ VSLA Guide
All photo credits: TierraMar



Case description:



Work in communities

TierraMar took a participatory approach to project implementation, partnering with the Zoological Society of London (ZSL) to apply learning from activities in the Philippines to the Merauke context. As a first step, communities were consulted to identify the biggest challenges, required resources, and to participate in designing the project. The VSLA was set up and TierraMar worked with local champions and a coordinator, to ensure community engagement and ownership. A Memorandum of Understanding (MoU) was signed between SeaNet’s on-ground project partner, ATSEF* Lestari, and the local community, allowing land use for net storage and installing a baling machine.

*Arafura and Timor Sea Expert Forum



Funding

TierraMar was supported by the Government of Australia and the Coral Triangle Initiative, and the World Animal Protection in two project phases. Funding was used for the management of the project, building stakeholder relationships, securing a net storing warehouse, for purchasing cleaning and baling equipment for the community to reduce storing space and transport costs, and to pay fishers for the nets. The project was also funded from the sale of the nets in the first round to Aquafil.



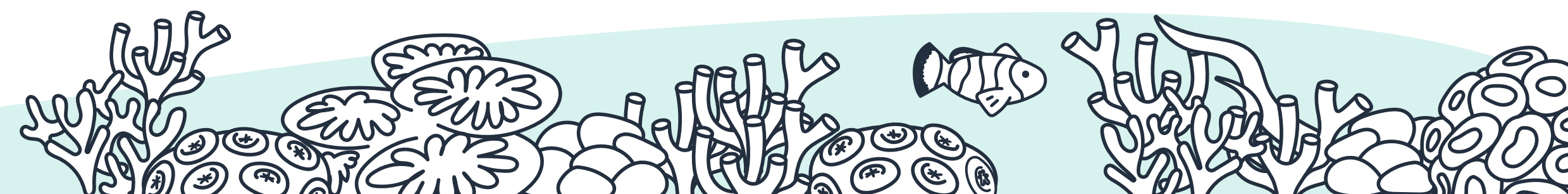
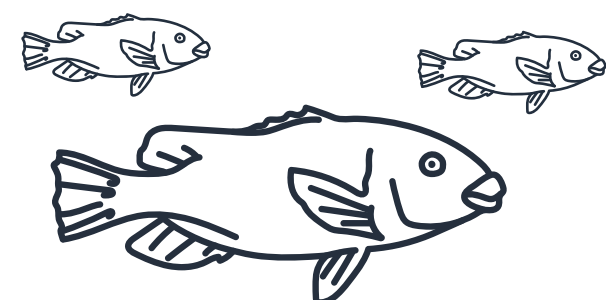
Long term sustainability, transparency & traceability

To ensure transparency, VSLAs were set up, and a partnership was built with a local financial institution, Savings and Loans Cooperative at Baitul Tanwil Mall (BMT) Bina Insan Sejahtera, that provided the business mechanisms to purchase the cleaned nets from its members. The purchasing mechanism was stipulated in the MoU between ATSEF Lestari and BMT Bina Insan Sejahtera. Agreements were made on where to store the nets. TierraMar established Aquafil as a buyer for the nets using the pre-existing business relationship between Aquafil and ZSL. TierraMar arranged transport and permits for exporting the nets. Payment for the material by Aquafil supported continuation of the initiative, and the community used some of the funds from the first sale of nets to build a tailored baling machine. An increase in transport costs was a challenge for cost-effective operation. Engaging a local recycler willing to purchase nets would lower transport costs and increase financial sustainability, but at the time, there was no one within the region who could take the nets.



Expansion

TierraMar is currently scoping the scaling of the programme across Indonesia to a national system. Recovering and recycling gear was part of a three-year program to improve fishing practices, focusing on net recycling, catch quality, endangered species protection, gear damage reduction, and post-harvesting improvements for the women of the community.



Achievements (Oct 2017 – Dec 2019):



18 tonnes of fishing nets have been diverted from the ocean. The reduction in discarded fishing nets decreases the risk of entanglement for marine wildlife and navigation hazards for fishers.

"Our environment around the Maro river has become very good. Previously when we were fishing, the discarded net had hindered us to operate and push the nets. After the ghost nets were cleaned up, thank God we got enough shrimp and fish." Amirudin Tamala Yolmen, community leader.



The project provided supplemental income for women cleaning nets, supporting education and household expenditures. A total of IDR 19,460,000 (USD 1,400) was deposited in the cooperative's account.

"It financially benefited my household. I can help pay my child's education fee". Amirudin Tamala Yolmen, community leader



The capacity building and training alleviated tension and mistrust between communities and local government and established a long-term relationship of collaboration.



The purchase of a baling machine with funds from the sale of nets by the cooperative group has continued to generate income for the community beyond the life of the project.



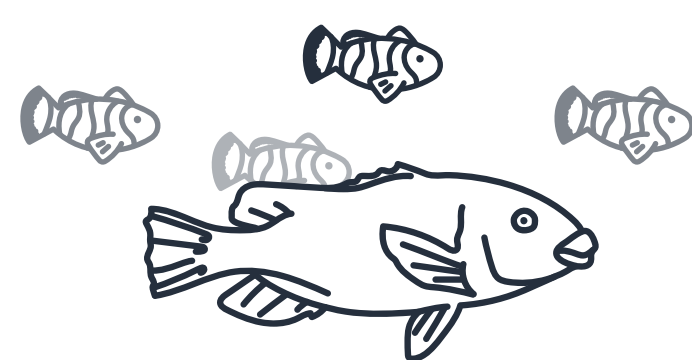
Net collection resulted in a cleaner coastline and beaches, which also supported municipality objectives to make Merauke cleaner.

Stakeholders:

- ▶ The project was implemented under the auspices of the Ministry of Marine Affairs and Fisheries Indonesia.
- ▶ TierraMar collaborated with the local government of Merauke District, and the Papua Province government. It also received permits for exports from the Government of Indonesia.
- ▶ The ZSL shared knowledge from its [Coast4C project](#) in the Philippines.
- ▶ TierraMar worked with a community leader to coordinate with the community, form the VSLA, and organize cleaning and preparation of nets for transport.
- ▶ Fishers were a key contributor of end-of-life nets. There was one larger company that assisted in raising the profile of the issue and encouraging the community to get involved.

Funding:

- ▶ Australian Government, Coral Triangle Initiative Initial project's funding, for one year.
- ▶ World Animal Protection: Funding for an additional six months.



Overcoming challenges:



Connecting with recyclers and creating a market for recycling

The SeaNet Indonesia project faced challenges in finding a local recycler for the fishing nets due to the remoteness of the community and the absence of net recyclers in Indonesia at the time. The only available recycler was located in Slovenia, making transportation costs prohibitive in the long term. To address this, TierraMar and our partners are working to establish a fishing net collection and recycling system across Indonesia. A review will be necessary to ensure that a fair price is paid to the communities for the collected nets.



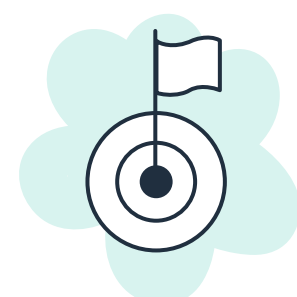
Project delays

Consultative meetings were held with local governments before project implementation to ensure government support, as bureaucracy can delay implementation. Poor weather caused flooding in the net storage area, causing a delay. A storage area elevated at least 30cm above ground is needed to prevent future flooding. The local baling machine broke at the start of the project as it was not fit for purpose for nets. To overcome this, the community built their own one and used it instead.



Reducing transport costs

SeaNet set up a storage facility for nets and a baling machine to compact the cleaned nets. This improved cost effectiveness of transport and provided a way to compress other materials for sale.



Other challenges

Infrastructure was a challenge in the first year with only one unsuitable net compactor and baler available. The community purchased a new compactor and baler in the second year with funds from the sale of fishing nets. The baler was fit for purpose to take nets and other materials, and these could also be compressed for extra income. As a competitive market emerged, SeaNet adjusted the price paid for nets.

Key success factors:

▶ Community empowerment :

Women and youths working in the ghost gear were empowered through capacity building components. Effective engagement with local government to strengthen capacity of communities and working with local private sector is important. SeaNet's local partner, ATSEF Lestari, has an extensive network to engage with government and local communities in the Arafura Sea, where they have been working for more than 10 years on marine and fisheries issues.

▶ Collaboration with industry:

Maintaining good relationships with fishing companies and the community is crucial for the success and continuity of the net collection programme. Some of the nets came from fishing companies through end-of-life or discarded nets while others were collected by cleaning up discarded nets along the shoreline and river banks across the province.

▶ Holistic sustainability:

Integrating marine conservation in the business model is key, as the collection and sale of nets creates both a socio-economic benefit and an environmental benefit.

▶ Diversifying income sources:

Providing means to clean and bale nets increases the value of material and reduces transport costs, creating a competitive advantage when selling to recyclers.

What do you need to replicate this practice?

01

Seed funding to set up partnerships, the VSLA and infrastructure in communities for collection, cleaning, drying and storing of net.

02

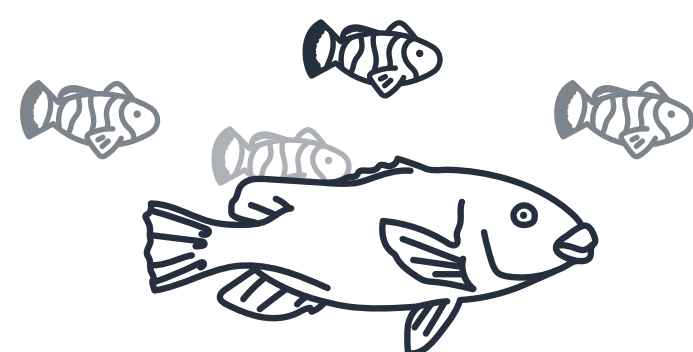
Women and men in the community recognize ghost nets as a key priority and they trust in the organizations introducing the project.

03

Willingness of local governments to collaborate.

04

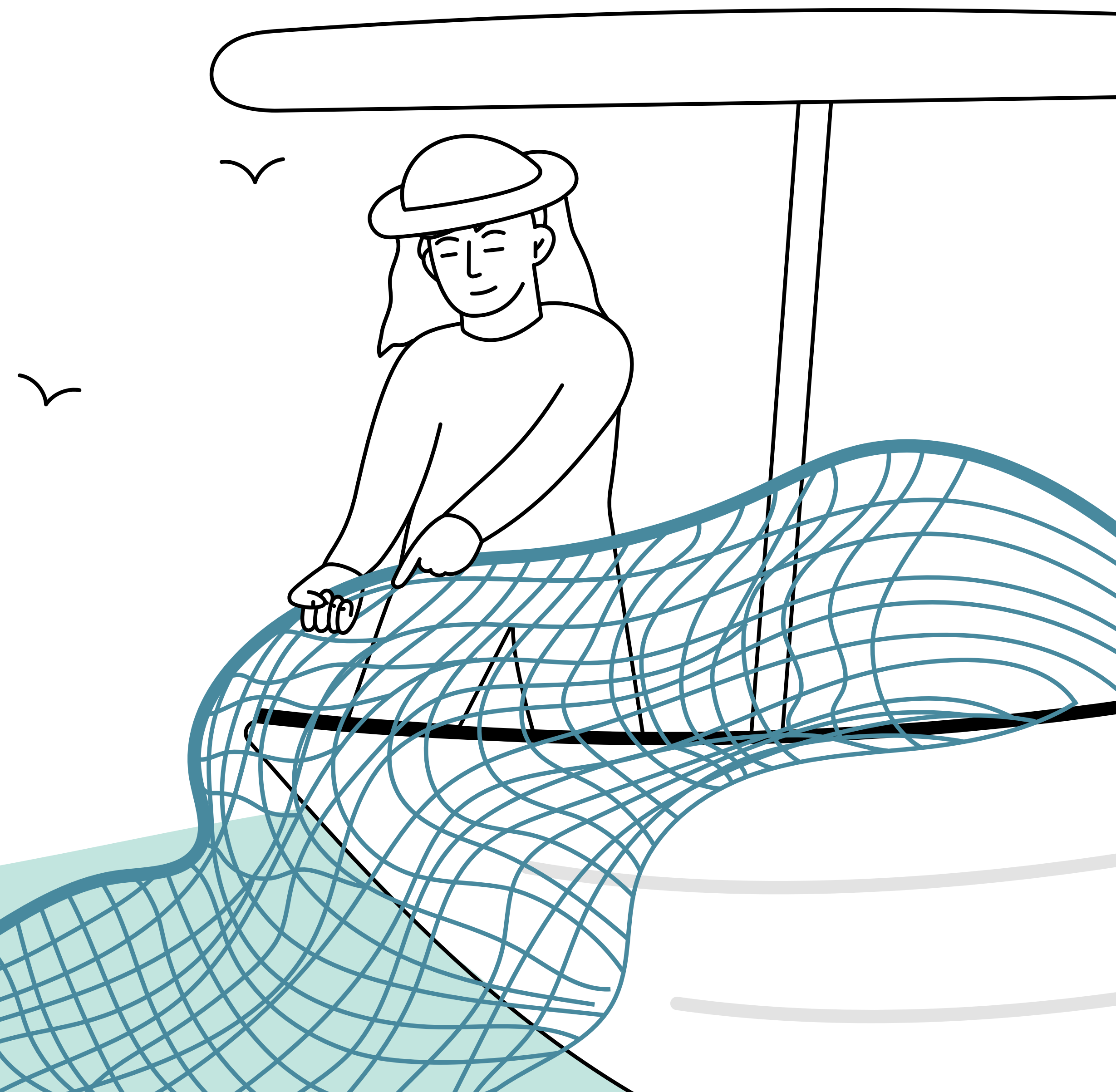
Existing local recycling infrastructure or a recycling company willing to buy end-of-life nets.



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