

LOST AT SEA

Combating Abandoned, Lost,
and otherwise Discarded Fishing Gear (ALDFG)

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GLOBAL GHOST GEAR INITIATIVE®

Ocean Conservancy®

ICSE

International Coalition of Fisheries Associations

Challenges in Design & production of fishing gear

An overview – and some reflections

Henrique Pacini

Economic Affairs Officer

UNCTAD

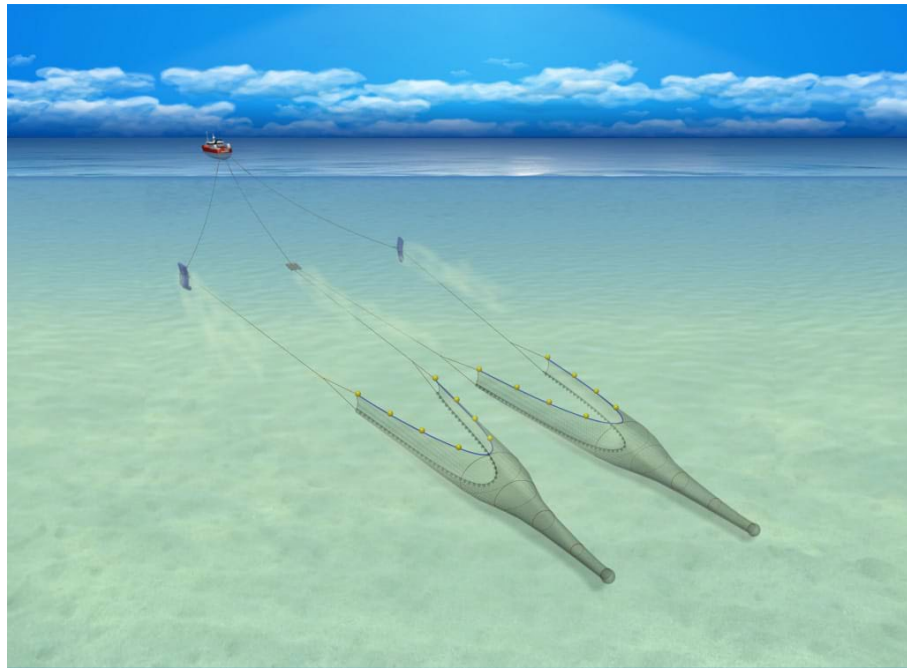
With contributions from Emma Algotsson (Gaia / Catchgreen) and Nadia Moalla (CEPESCA), May 28th 2023



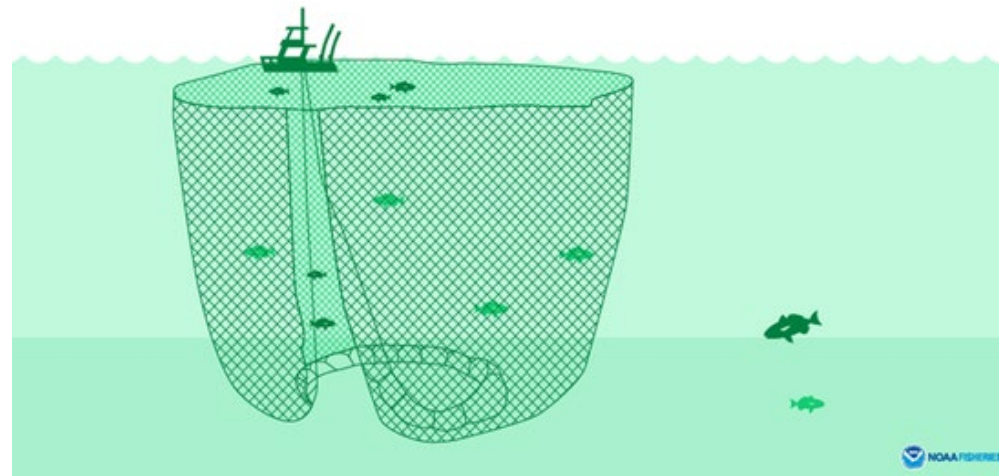
Fishing gear – Design & production basics

- Material make-up (Polypropylene PP, Polyethylene PE and Polyamide (Nylon/PA6)).
- Governance of innovation: – Most gear sourced from Asia
- 70-80% of ship fuel consumption spent on towing fishing gear

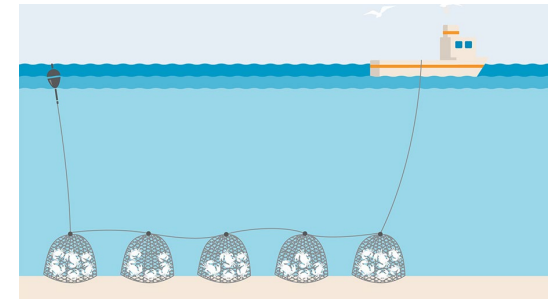
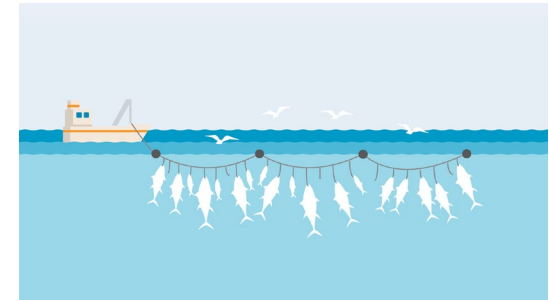
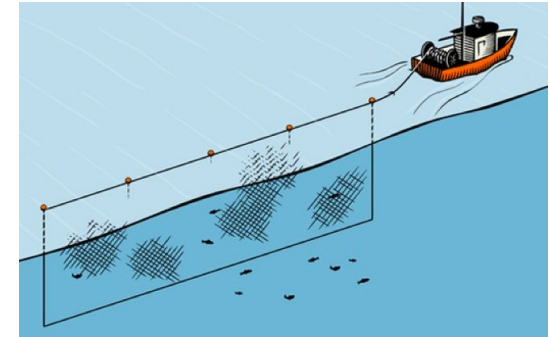
Towed



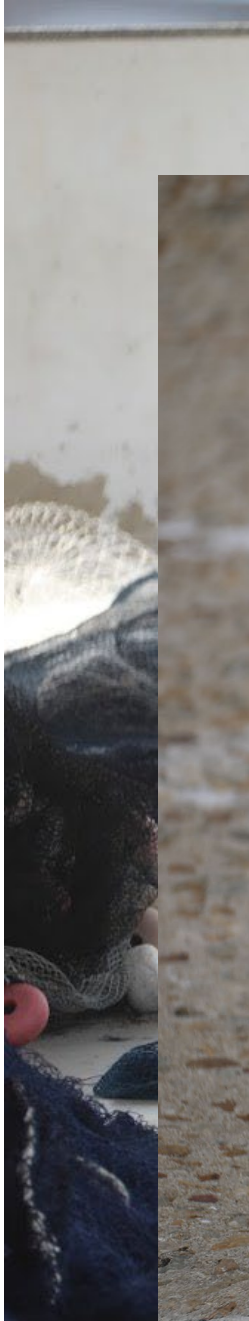
Encircling



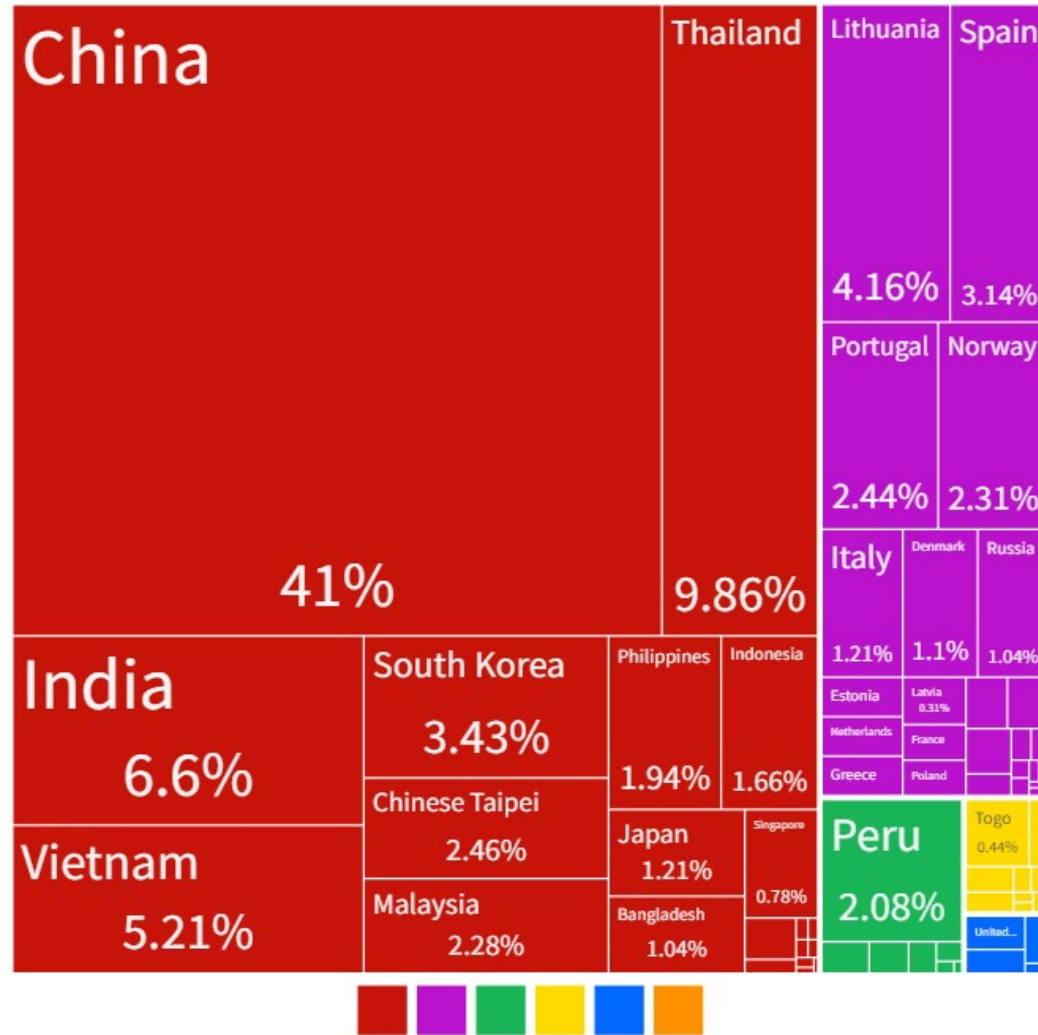
Static



Sources: Seafish.org; NOAA Fisheries; MSC

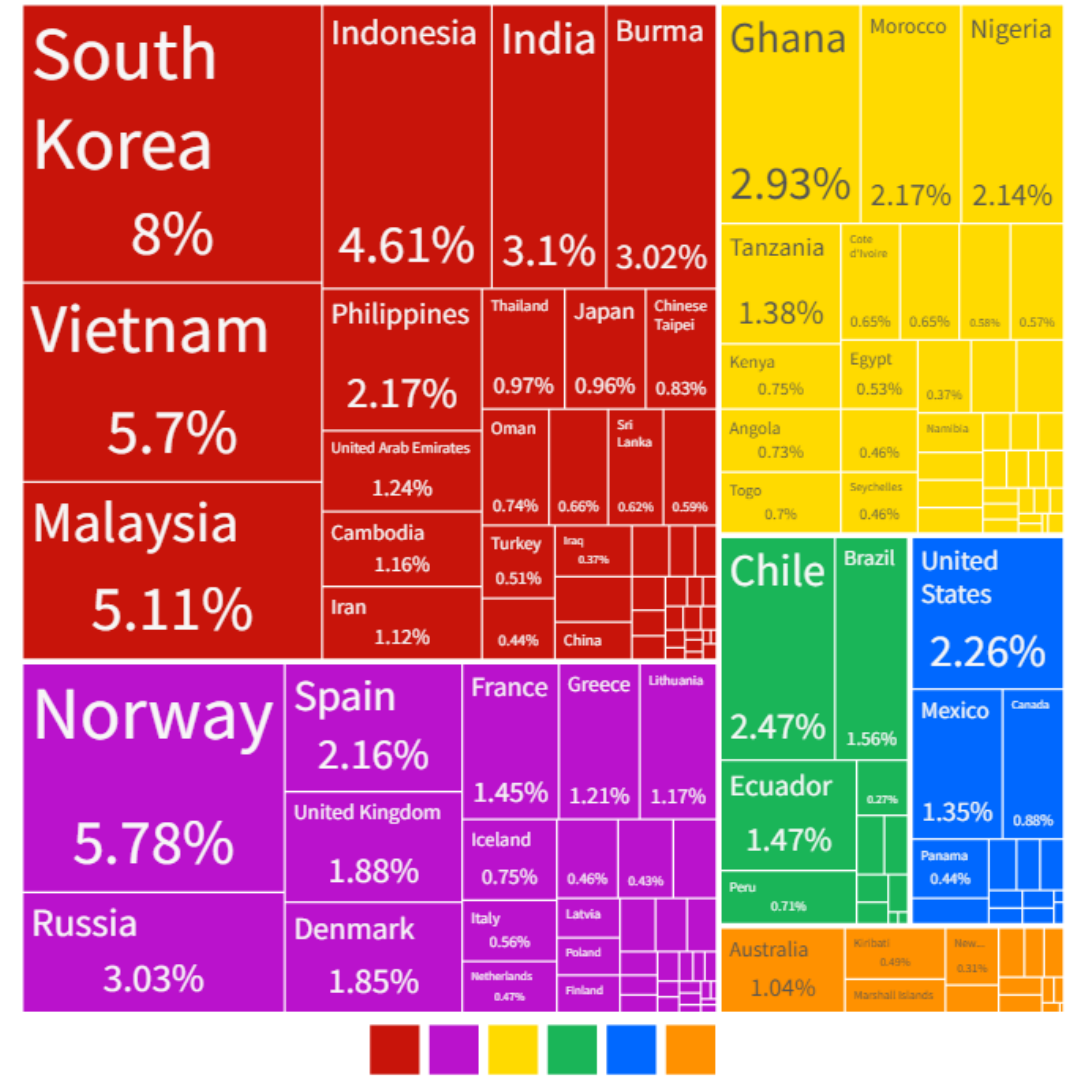


Exporters of Made up fishing nets, of manmade textile materials (20
 [Click to Select a Country]
 Total: \$1.03B



2021
data

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 Total: \$1.03B



General strategies to mitigate ALDFG at the design & production phase

- Focusing on materials
 - To last longer & enable repair and better recyclability (monomaterials)
 - To biodegrade
 - Use alternative / natural materials
- Focusing on traceability systems backed by enforcement

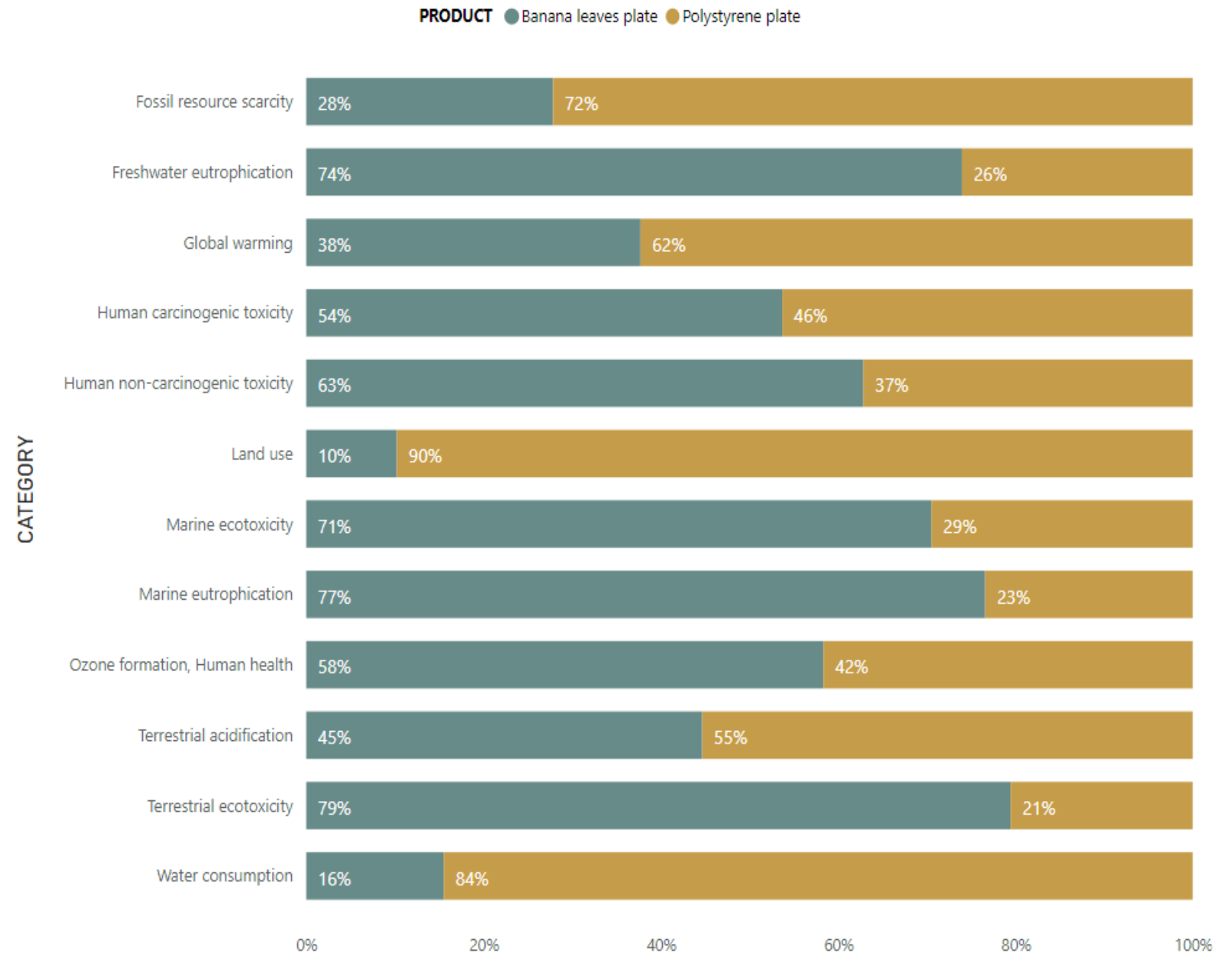
Design & Production actions alone not enough. Important to act across supply chain **SYSTEM**.

- production, use and end-of-life management of gear.

Gear design & production – substitution and alternatives also carry consequences.

SMEP plastics-substitutes dashboard

- Allows analysis plastics compared to material substitutes & reusables
- Reuse is fundamental for better environmental performance



<https://unctad.org/news/dashboard-shows-environmental-impacts-exports-african-and-south-asian-countries>

SMEP Programme plastic project portfolio

Organisation/ Project Name	Consortium Members/ Partners	Description of Project	Geography
Blue Skies Pty Ltd.	Waitrose & Partners	Blue Skies aim to establish a multi-stakeholder Research and Development Hub, which addresses single-use plastic in the agri-business to the point-of-sale value chain. The hub will initially address single-use plastic in disposable workwear and agri-film.	Ghana
Chinhoyi University of Technology (CUT)	Kudiwa Waste and Energy Solutions	Utilising plastics waste as a feedstock, Chinhoyi University will be establishing a manufacturing facility for plastic roof tiles with solar power features to address household energy needs.	Zimbabwe
The Council for Scientific and Industrial Research (CSIR) – South Africa	Elizade University, Nigeria	CSIR will undertake research and development into bio-degradable mulch film to replace Polyethylene (PE) mulch used in the agriculture value chain, tailoring biodegradation rates to climatic and soil conditions.	Nigeria
The Flipflop Project	Coastal Oceans Research and Development – Indian Ocean (CORDIO) East Africa; Northumbria University, School of Design; University of Portsmouth	The Flipflop Heritage Boats Project aims to establish a closed-loop waste management centre for the Lamu archipelago. This is linked to a heritage boat building centre, that aims to scale up plastic boat building in the region.	Kenya
Gaia Biomaterials	Kompost-it; Alnet; Sustainable Seas Trust	Gaia will undertake research and development into alternative biodegradable solutions for fishing nets, also working alongside regional fishing industry associations to ensure user acceptability, thus tackling the challenges of ghost nets in the marine environment.	South Africa, Tanzania & Kenya
International Synergies Limited (ISL) Limited	Maxwell Stamp Limited	ISL aim to address plastics pollution reduction through industrial symbiosis and will research, identify, and develop innovative reuse solutions for local uptake.	Bangladesh
PA Consulting	Global Access Diagnostics Ltd (GAD); PulPac	PA Consulting will research and develop compostable lateral flow test cassettes applying dry moulding of cellulose fibres obtained from sustainable sources as an alternative to single-use plastic.	To be confirmed
RiverRecycle Limited	Beach Clean Up Ghana Ltd.; Ambitious.Africa	RiverRecycle will implement a patentable remediation system to collect plastic waste in rivers, utilising this as feedstock to end products, specifically plastic boards and pyrolysis oils.	Ghana
University of Cambridge	Nepal Communitere; Field Ready	The University of Cambridge will establish multiple small-scale plastics remanufacturing units, producing building and construction products suitable for local construction requirements.	Nepal
University of Warwick	Environmental Sustainability Associates Limited (ESAL); De Montfort University (DMU); Chatham House (CH); GIVO; Zero Waste Goods Limited (ZWGL)	The University of Warwick will implement a technology-enabled plastic waste management system, processing waste plastics into flake products and pyrolysis oils.	Nigeria

Agrimulch



GAIA /
CATCHGREEN



[Smepprogramme.org/plastics](https://smepprogramme.org/plastics)



Biodegradable fishing nets



An impact-driven solution to marine sector waste

Replacing harmful nylon and polyethylene in fishing nets with a biodegradable biopolymer.

BIODOLOMER®OCEAN

A mix of PBS (polybutylene succinate) and PBAT (polybutylene adipate terephthalate).

Offers the right balance between strength and flexibility.

Designed for mono-extrusion and the spinning of thread.

Used to manufacture various types of roped and nets.

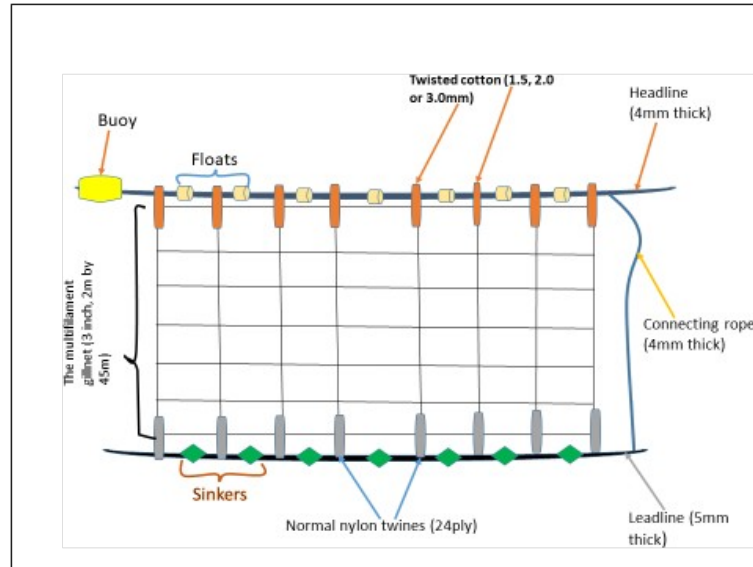


SMEP project
GAIA /Kompost-it

Biodegradable
fishing nets



Piloting



Piloting Kenyan and South African waters to confirm fishing efficiency.

PILOTS 2023

Trawl nets – South Africa

Modified gillnets. – Kenya

Coral restoration – Kenya and French Polynesia

Seaweed harvesting – Kenya

Kelp farming – Namibia