



The Global Ghost Gear Initiative®

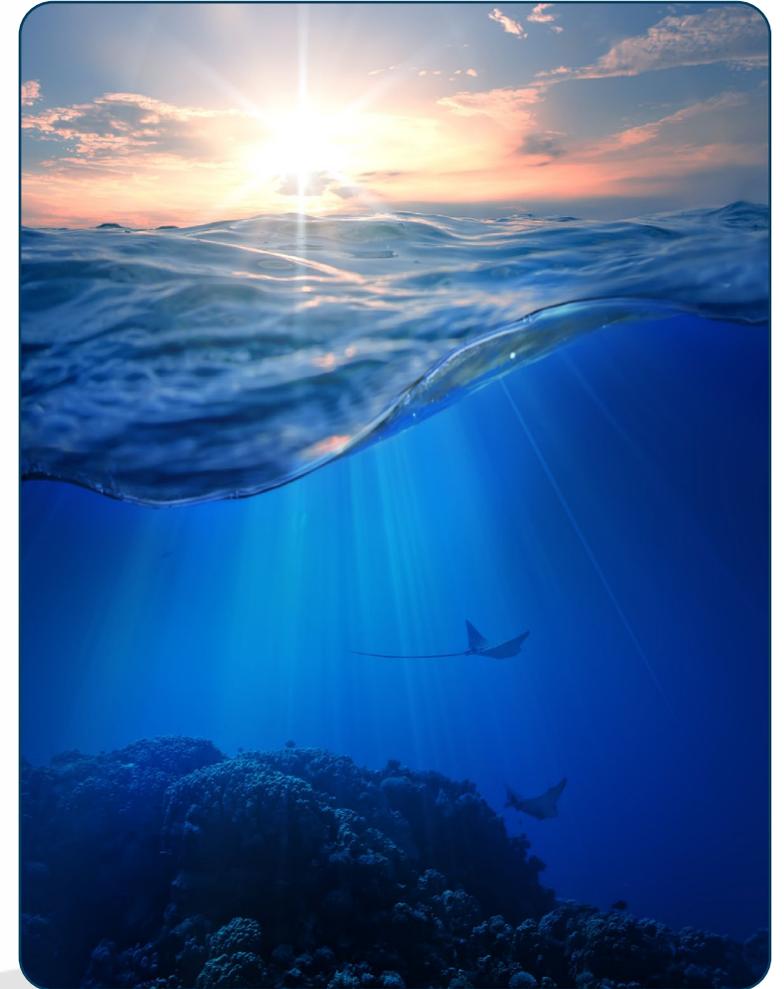
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Global Overview of Gear Marking Strategies for the  
Management of ALDFG

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OSPAR Workshop on Gear Marking Strategies  
5<sup>th</sup> February 2025

- Introduction to the Global Ghost Gear Initiative.
- Overview of abandoned, lost and otherwise discarded fishing gear (ALDFG).
- Gear marking strategies for the prevention, mitigation and remediation of ALDFG.
- Policy interventions and gear marking.
- Q&A.





# Introduction to the Global Ghost Gear Initiative®

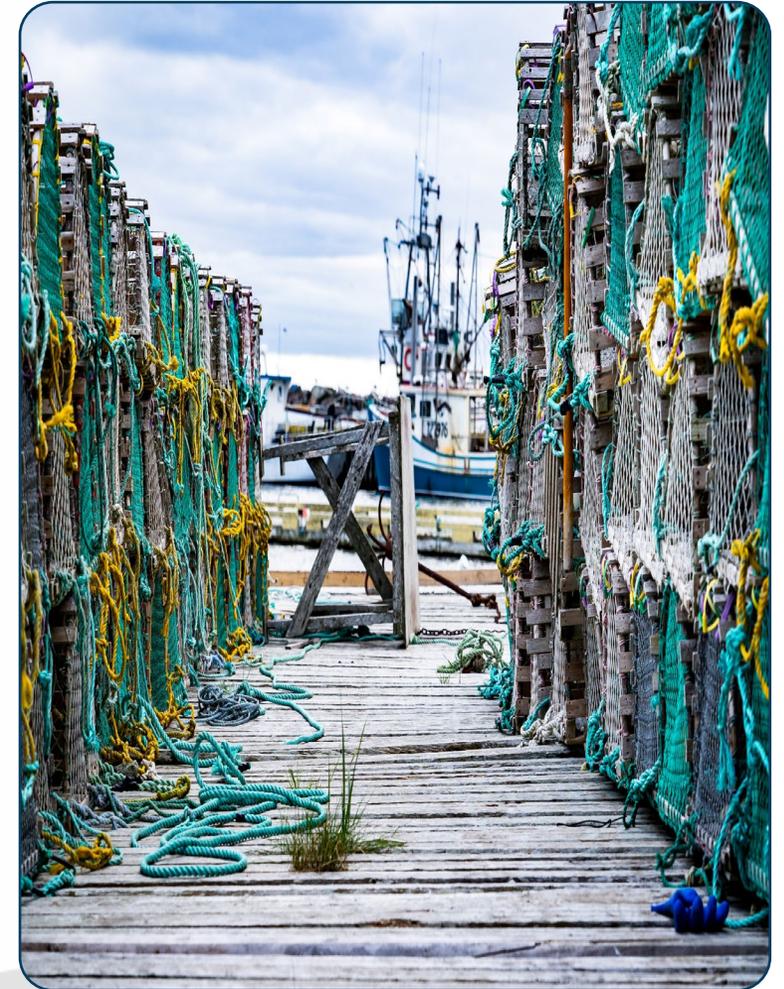
Housed under Ocean Conservancy, the Global Ghost Gear Initiative® (GGGI) is the only cross-sectoral alliance committed to driving solutions to the problem of lost, abandoned and otherwise discarded fishing gear worldwide.

## Aims:

- To **improve** the health of marine ecosystems;
- To **protect** marine life from harm;
- To **safeguard** human health and livelihoods.

## Approach:

- **Preventing** gear from becoming lost by promoting best management practices;
- **Mitigating** the impacts of gear that does get lost;
- **Remediating** the effects of lost gear via targeted removal efforts.



# Global Ghost Gear Initiative® Overview

**144 member organizations**  
**24 supporting governments**  
**4 high level global affiliates**

8 OSPAR & HELCOM countries

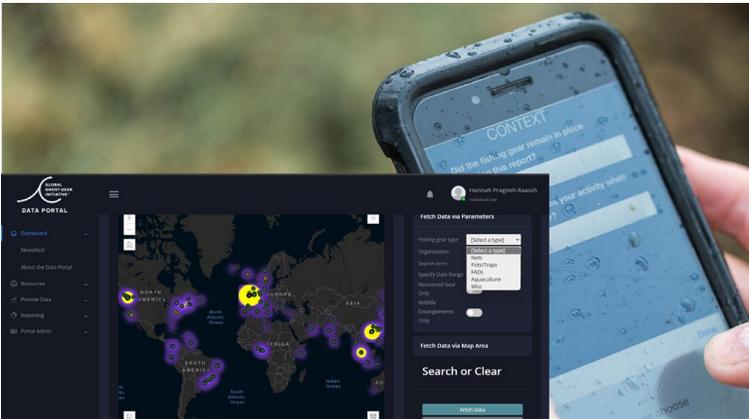


**GGGI Signature Projects** (yellow circle)  
**GGGI Supported Projects** (green circle)





# Introduction to the Global Ghost Gear Initiative®



Building Evidence



Defining Best Practice & Informing Policy

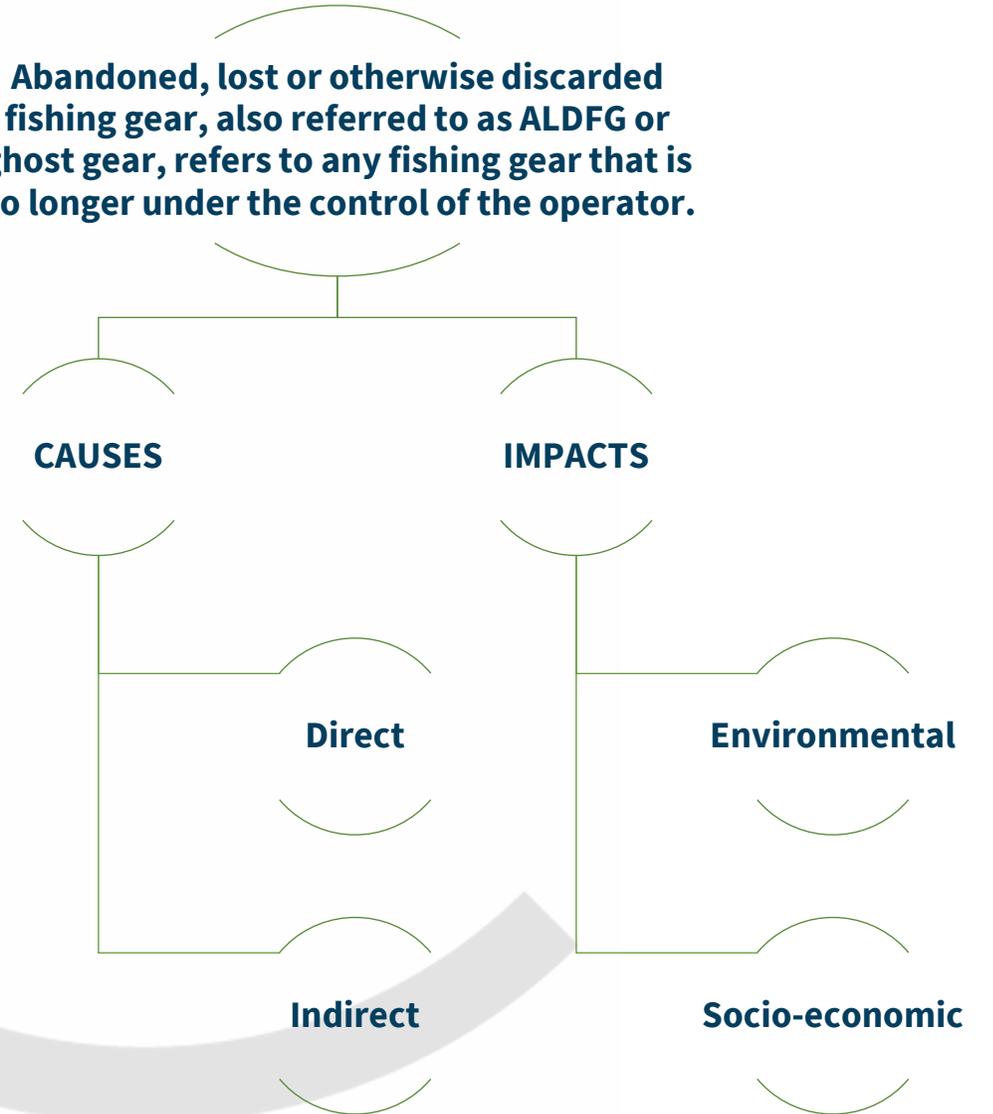


Catalyzing & Replicating Solutions

# Overview of ALDFG



Abandoned, lost or otherwise discarded fishing gear, also referred to as ALDFG or ghost gear, refers to any fishing gear that is no longer under the control of the operator.



# Impacts of ALDFG

## Environmental

Ghost gear is the most harmful form of marine plastic pollution.

Globally an estimated 5.7% of fishing nets, 8.6% of traps and pots, and 29% of fishing lines end up lost or abandoned in the marine environment annually.

45% of all marine mammals on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species have been impacted by lost or abandoned fishing gear.

## Socio-Economic

ALDFG threatens global fish stocks by killing or injuring harvestable species.

Fishing is a major source of both nutrition and employment for people on almost every continent and crucial to sustaining the livelihoods of coastal communities.

An estimated **5-30%** of global harvestable fish stocks (depending on fishery / geography) are killed by ghost gear every year, threatening global **food security, coastal communities, and fisher livelihoods**

# Importance of Gear Marking

- Improved fisheries management;
- Prevention and mitigation of ALDFG:
  - Ownership and legality of use;
  - Indicate positioning – reduce gear conflicts;
  - Identify origin of gear;
- Prevention of illegal, unreported and unregulated (IUU) fishing;
- Recovery of gear.



# Gear Marking Strategies

- Some national/regional gear marking protocols;
- Small-scale/artisanal fisheries;
- Commercial fisheries;
- Variety of different gear marking options from low-cost, low-tech markers (e.g. bamboo tags, reflective markers) through to sophisticated gear marking technology units;
- Considerations required when adopting a gear-marking system including any applicable regulations, fishery, gear-type, cost, durability (tags), attachment etc.
- Implemented at the manufacturer or fisher level.



# FAO's Voluntary Guidelines

- July 2018: VGMFG endorsed by the thirty-third FAO Committee on Fisheries (COFI 33).
- 2019: FAO & GGGI hosted 4 regional workshops to raise awareness on VGMFG and best practices.
- VGMFG provide practical guidance on the implementation of different gear marking strategies across gear types:
  - reporting, recovery and disposal of ALDFG / unwanted fishing gear
  - commercial traceability of fishing gear



Food and Agriculture Organization  
of the United Nations

Organisation des Nations Unies  
pour l'alimentation et l'agriculture

Organización de las Naciones Unidas  
para la Alimentación y la Agricultura



VOLUNTARY GUIDELINES ON THE  
MARKING OF FISHING GEAR

DIRECTIVES VOLONTAIRES SUR LE  
MARQUAGE DES ENGINS DE PÊCHE

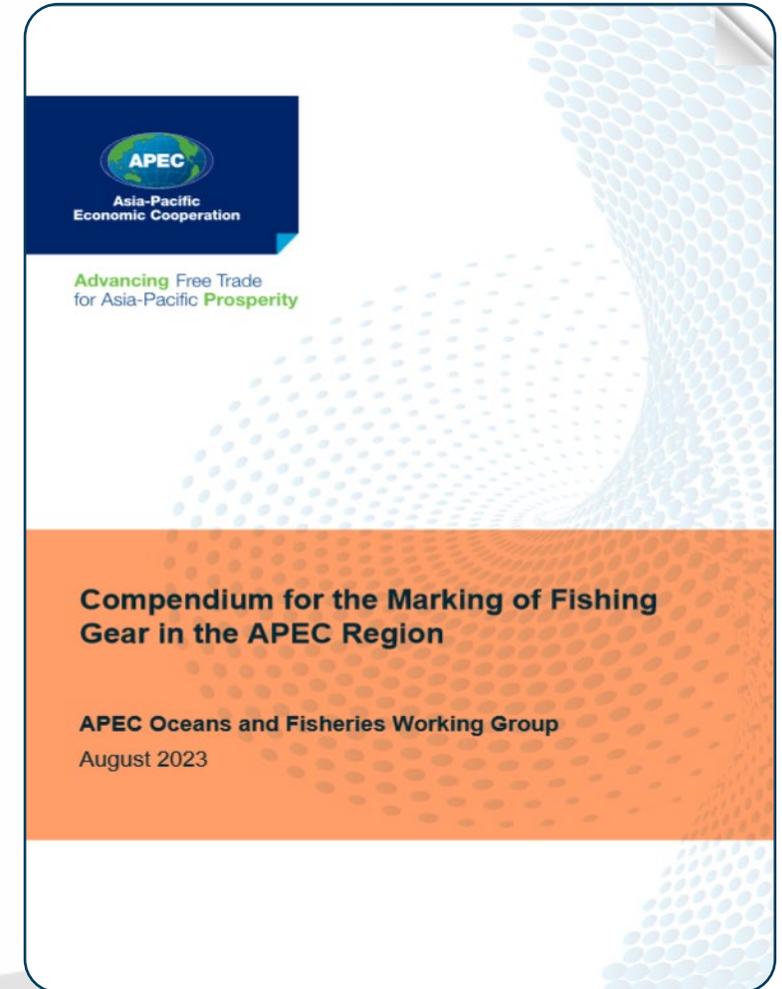
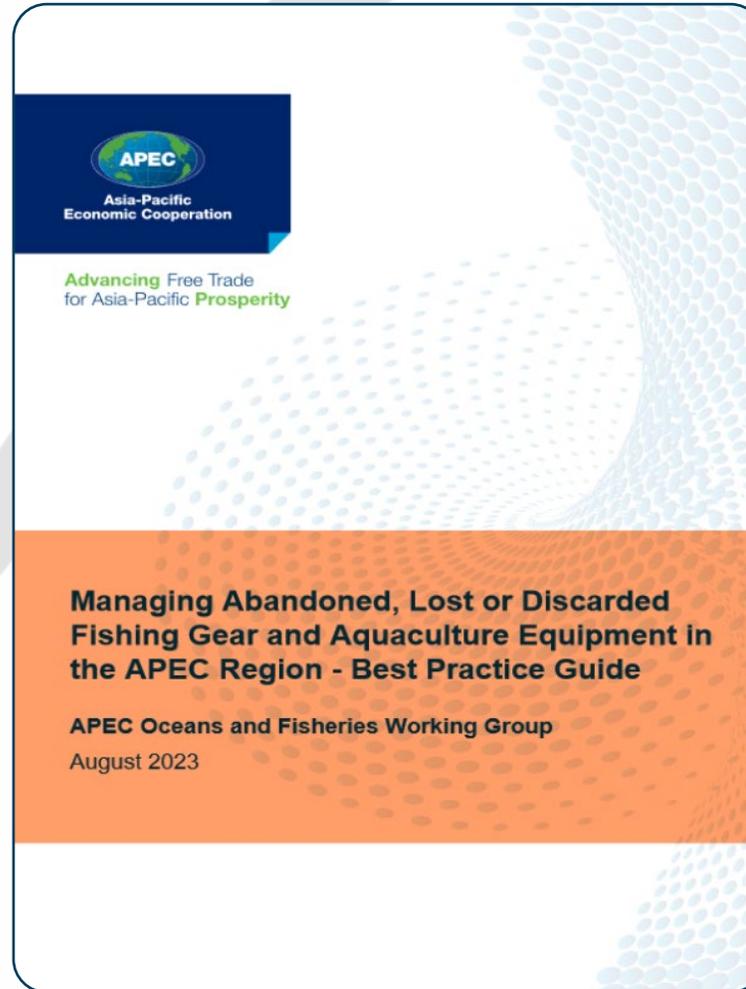
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# Asia Pacific Economic Cooperation

2019 - 2023:

- Project supported by member economies:
  - Malaysia
  - Thailand
  - United States
- Development of :
  - Best Practice Framework for the Management of Fishing and Aquaculture Gear for APEC Economies (APEC-BPF)
  - Compendium for the Marking of Fishing Gear in the APEC Region





# Canada's National Gear Marking Strategy

- Mandatory gear marking implemented in Canada's commercial fisheries;
- Identification or marking of fishing gear is broken down into two different components:
  - identification by labelling gear or **gear marking** (e.g., float, buoy or tag attached to the gear)
  - identification of fishery by color code or **rope marking**.
- Prohibited for any person to set, operate, or leave any unattended fishing gear (other than mobile gear or handlines) unless the gear is marked;
- Vessel registration number (VRN), or the gear owner's name shall be painted on or otherwise securely affixed to a tag, float, or buoy attached to the gear.





# Canada's National Gear Marking Strategy

## Atlantic Commercial Fisheries

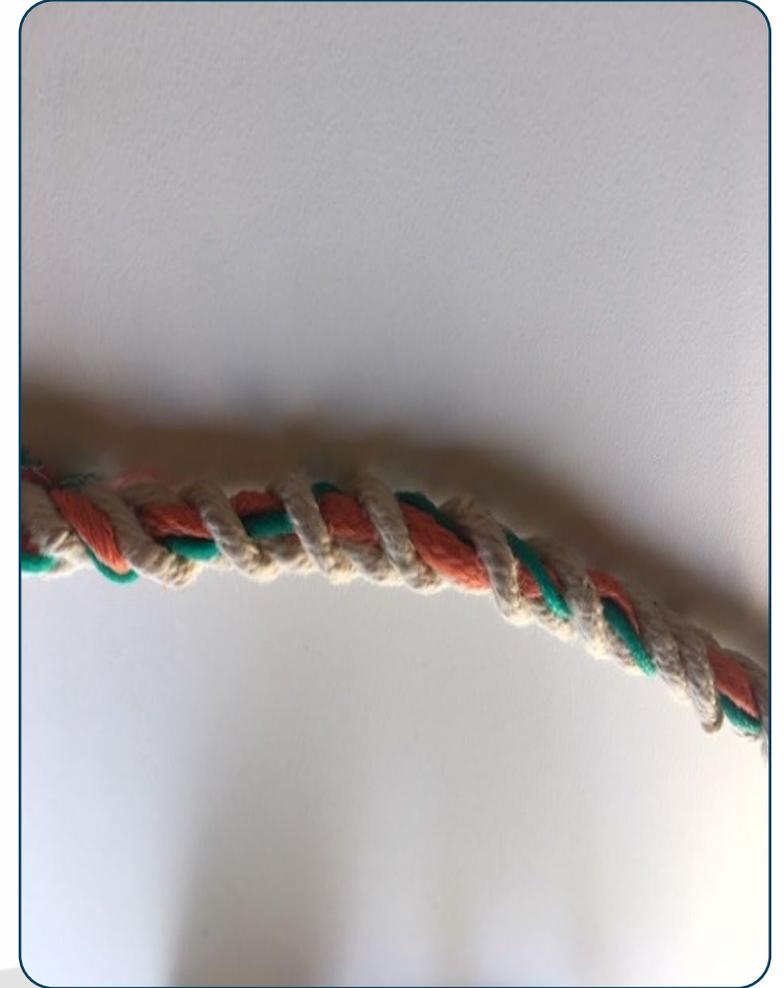
- Fishing area
- Tag supplier identification number (TSIN) assigned by DFO to the approved tag supplier when their tagging plan is approved;
- Two-digit prefix/identifier ahead of the sequential number to indicate the current fishing season;
- Unique sequential number;
- Identification of the tag manufacturer and stamp.

## Pacific Commercial Fisheries

- Tagging requirements vary by sector, fishery, and Pacific fishery management area (PFMA) and are defined in integrated fisheries management plans (IFMPs) which are typically adjusted annually. This means conditions can evolve and be updated on a yearly basis as required.
- Requirements can also vary for indigenous groups (tags not always required).
- Recreational fisheries, which are very active in the Pacific region, also have requirements
- Examples include vessel registration number (VRN) being engraved directly onto individual trap or radio frequency identification (RFID) chips are required for vessels participating in an electronic vessel monitoring program

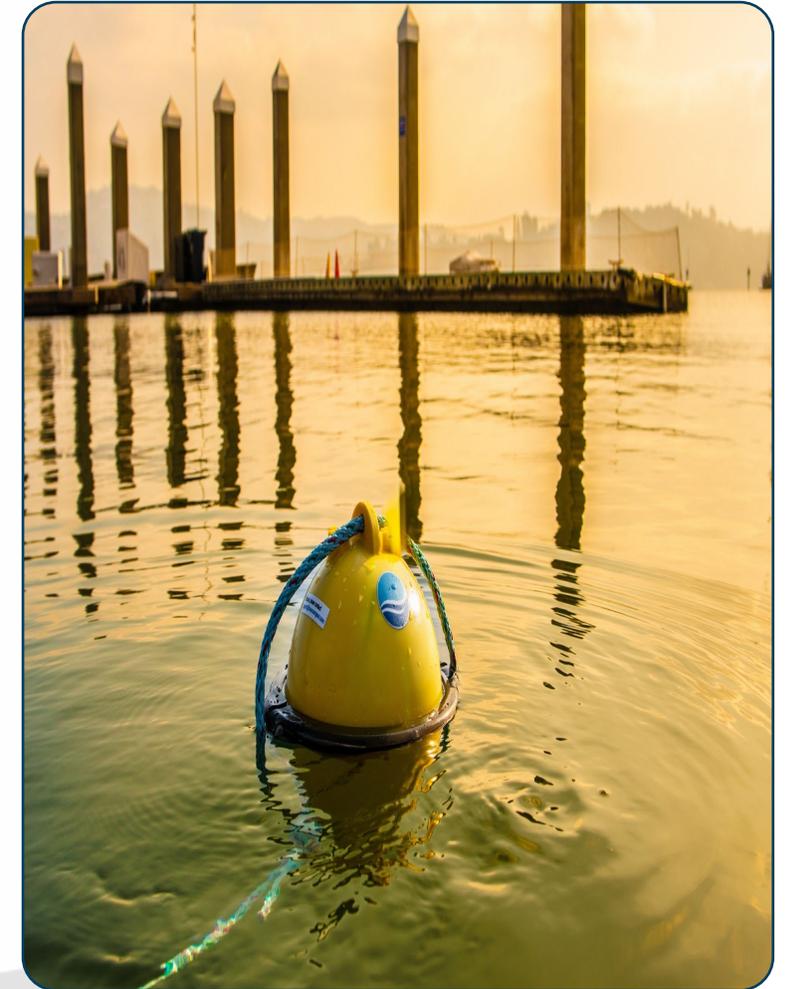
# Canada's National Gear Marking Strategy

- Rope marking introduced in 2017;
- Canada aims to differentiate gear from the different fisheries, regions and sub-regions in Canada to support efforts in gathering data on the circumstances in which gear is lost;
- Rope marking and its associated mandatory colour scheme for marking are required by conditions of licences;
- Two different methods:
  - Using new rope with **integrated** coloured yarns following a specific pattern;
  - **Interlacing** coloured twine pieces within existing rope.



# GGGI Signature Projects: Gear Marking Trials

- Gear marking trials in North and Central America, Indonesia, Vanuatu and the Caribbean;
- Application of different gear marking tags and/or technology e.g.
  - SatLink
  - Buoy.Fish
  - Blue Ocean Gear



# GGGI Signature Projects: Vanuatu

## Phase 1:

- SatLink Satellite Buoys with Echosounders;
- Pelagic Data Systems VTS Units.

## Phase 2:

- Blue Ocean Gear's (BOG) Farallon Smart Buoy system;
- Collecte Localisation Satellites' (CLS) NAOS E-gear GenTracker and Marine Mammal Tag;
- Development of retrieval and monitoring protocols.



# GGGI Signature Projects: Indonesia

- Project began in 2017 - led by the Indonesian Ministry of Marine Affairs and Fisheries;
- Targeted gillnet because of prevalence and ghost fishing impact;
- Assessed the practical and economic feasibility of various gillnet marking options in Indonesia in two pilot locations;
- Purse seine gear marking trial.



# Policy Interventions & Gear Marking

## International Legally Binding Instrument to End Plastic Pollution, Including the Marine Environment

- Intergovernmental Negotiating Committee
- Provisions across full life cycle of plastic fishing and aquaculture gear to prevent ALDFG.

## International Maritime Organization

- United Nation's agency responsible for the safety and security of shipping and the prevention of marine and atmospheric pollution from ships.
- International Convention for the Prevention of Pollution from Ships (MARPOL) - Annex V Prevention of Pollution by Garbage from Ships.



INTERNATIONAL  
MARITIME  
ORGANIZATION



**Thank you!**

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