



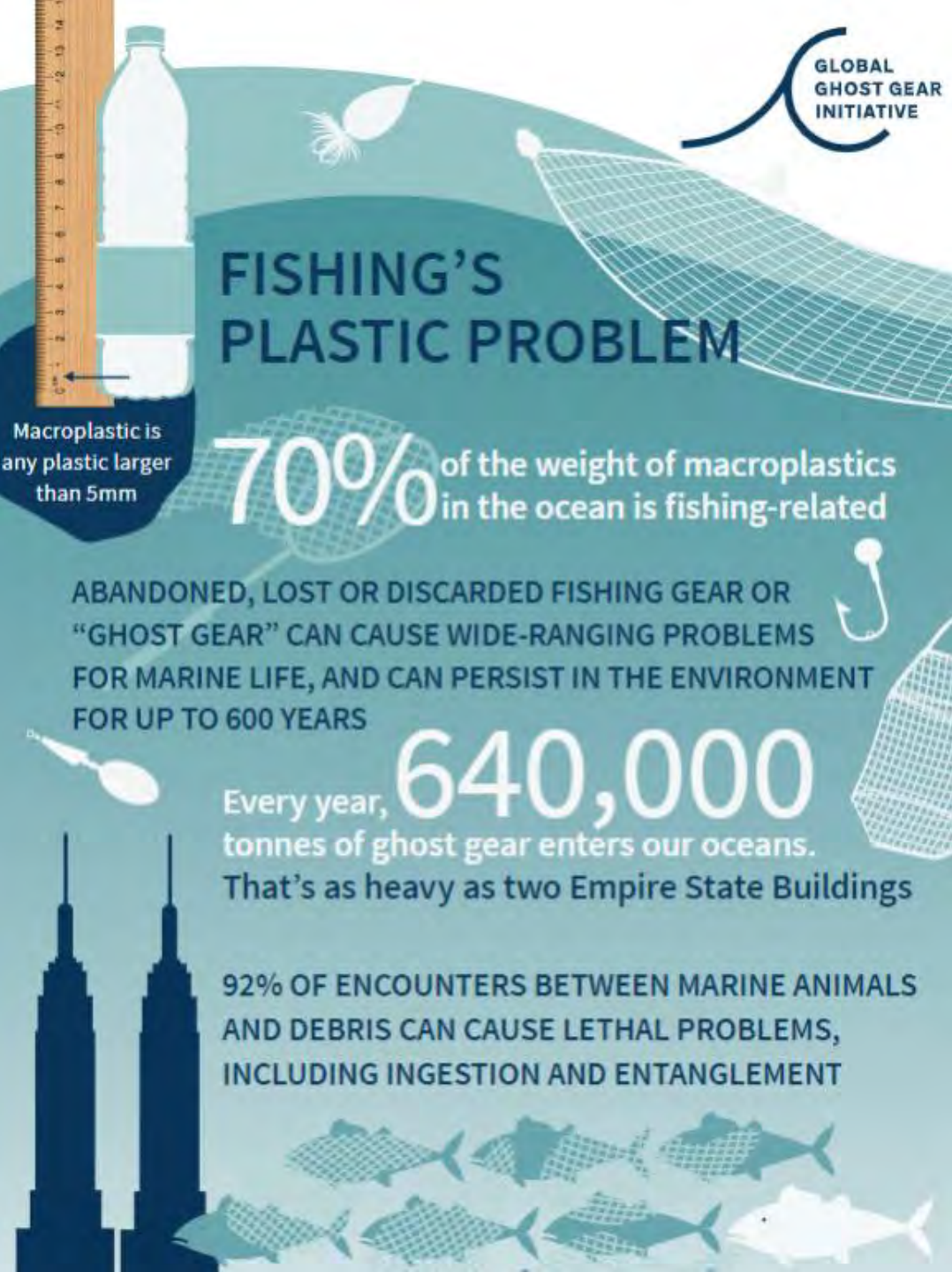
# The Global Ghost Gear Initiative

Driving Solutions to the Problem of Lost  
and Abandoned Fishing Gear Worldwide

GLOBAL



[www.ghostgear.org](http://www.ghostgear.org)



# A Global Problem

In 2009, UNEP & FAO estimated that at least **640,000** tonnes of fishing gear is abandoned, lost or discarded in our oceans every year – this figure is likely to be **much higher** today.

Being purposely designed to capture marine life, “ghost gear” is **the most harmful form of marine debris**.

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

Recent studies suggest that ghost gear could consist of as much as ~ **46% - 70 % of all macro-plastic** in our ocean when measured by weight.

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# Global Frameworks on ALDFG

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- **MARPOL Annex V 73/78** - Prevention of disposal of garbage from ships
- **FAO Code of Conduct for Responsible Fisheries (1995)** - Fishing gear should be marked
- **International Guidelines on Bycatch Management and Reduction of Discards (FAO 2011)** - reducing the impact of lost fishing gear.
- **Port State Measures Agreement** to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (2009)
- The United Nations **2030 Agenda on Sustainable Development** (A/RES/70/1):
  - Sustainable Development Goal target 14.1: Prevent and significantly reduce marine pollution of all kinds, including ALDFG
- **FAO Voluntary Guidelines on the Marking of Fishing Gear** (2018)

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# A Global Solution



The Global Ghost Gear Initiative (GGGI) is a collective of NGOs, private sector, fishing industry, academia and governments, all contributing to tackle this problem on a global scale in an inclusive, holistic and circular way, focusing on:

- **Reducing** the amount of gear lost in the oceans;
- **Removing** the gear that is already there;
- **Recycling** the gear that is recovered or at end of life.

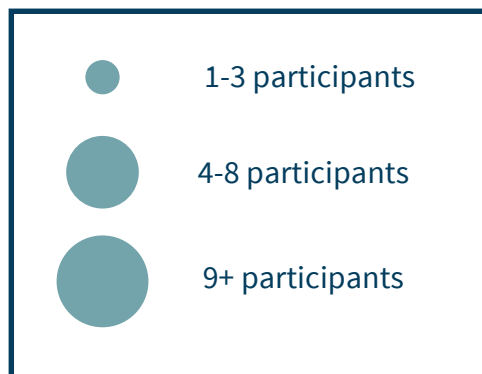
## Aims:

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



## A Global Reach

99 participant organizations



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## A Global Reach

14 supporting governments

6 high level global affiliates



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# GGGI – A Strong Team

## GLOBAL GHOST GEAR INITIATIVE





# GGGI Outputs 2018/2019



## GGGI Working Group Outputs

### Build Evidence Working Group

- Launch of global data portal and Ghost Gear Reporter app for reporting and tracking lost gear.

### Define Best Practice and Inform Policy Working Group

- Roll out of Best Practice Framework for Management of Fishing Gear to certification bodies, governments, and companies.

### Catalyse and Replicate Solutions Working Group

- 10 new GGGI solution pilot projects underway around the world in 2018/2019 – 7 completed in 2016/2017.



# GGGI Global Data Portal



**GGGI DATA** Search...

Main Global Ghost Gear Initiative: Data Portal

Dashboard

Data Tools

- Gear Reporter App
- Bulk Upload
- Data Cards

### Data Partner: Bulk record upload

Choose Files No file chosen

Upload

DATA SNAPSHOTS

Global EU USA

A world map with a dark background and light blue data points scattered across the continents, primarily concentrated in the Pacific and Atlantic Oceans.

**Gear Location**

A map of San Francisco, California, with a red location pin on the coast. Labels include "CHALCEDONY ROW", "PAC TO COND", "AYALON PL", "Mission Blvd", and "BAY VIEW VILLAS".

Latitude: 32.793486 Longitude: -117.256855

**Gear Details**

What is the 'stretched mesh size' of the net?

A diagram showing two types of fishing net mesh. The top part, labeled "STRETCHED MESH", shows a rectangular mesh being pulled apart by two hands. The bottom part, labeled "OPEN MESH", shows a diamond-shaped mesh.

The size of the net mesh from knot to knot when stretched flat as illustrated, helps us to identify the type of net.

Mesh size (slide to adjust): 8 cm

**Gear Details**

What type of gear are you reporting?

NET

POTS

LINE & HOOKS

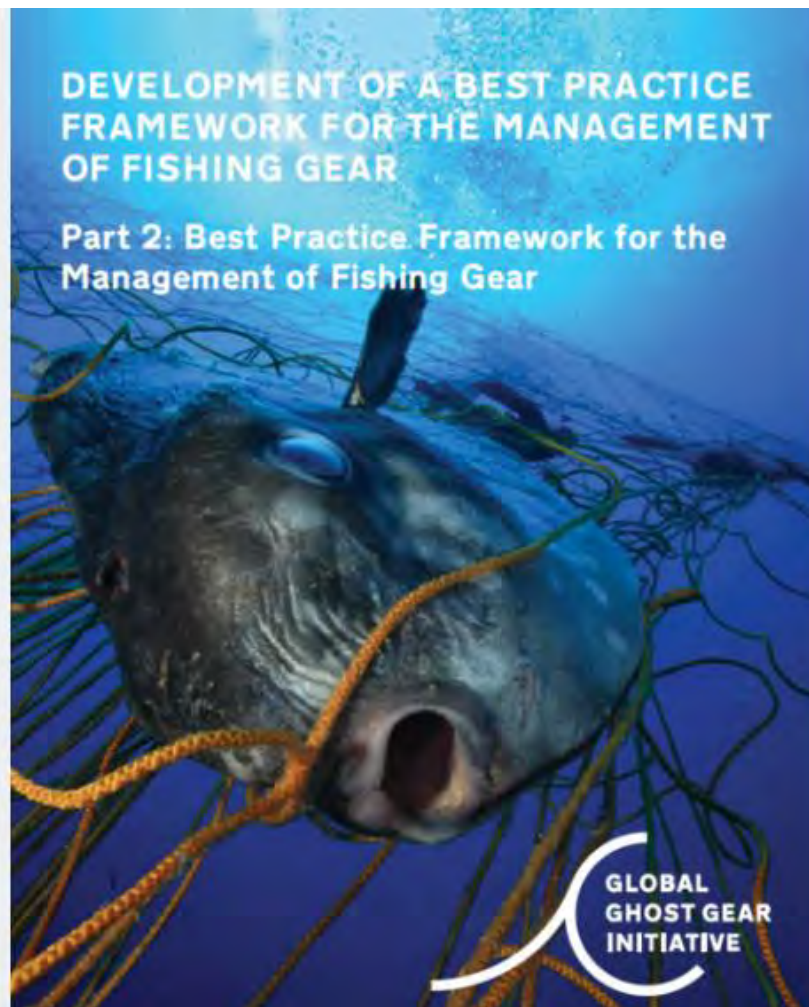
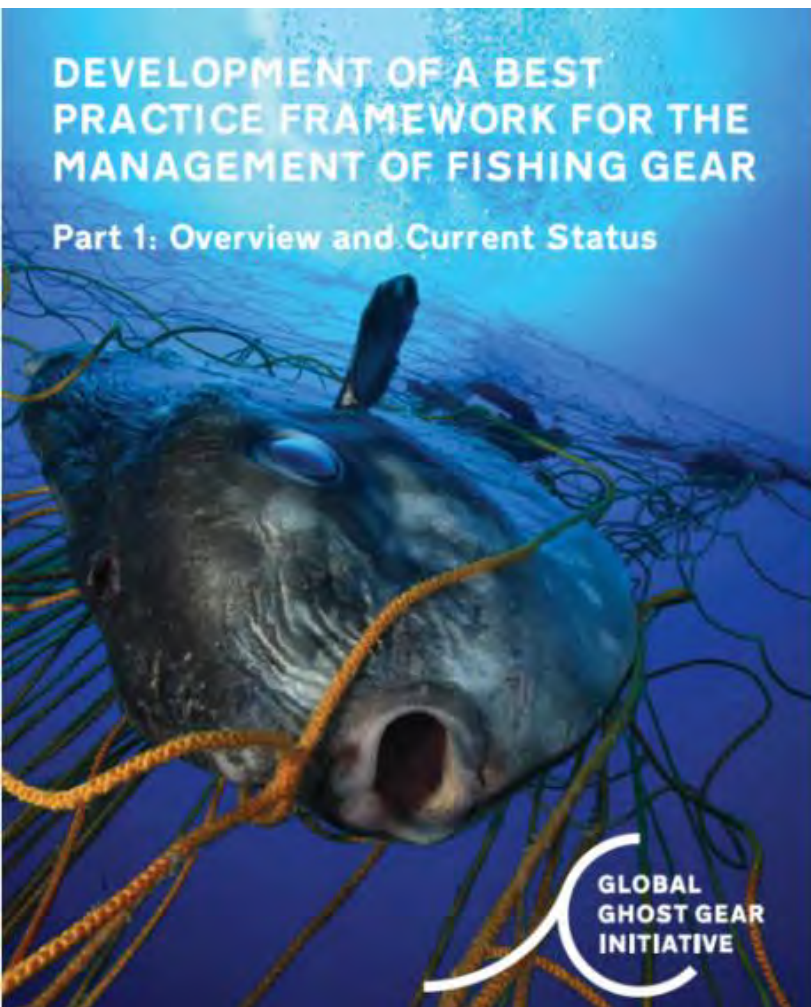
FADS

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# Best Practice Framework for Management of Fishing Gear (BPF)





# Best Practice Framework

## Gear Risk Assessment



GEAR CLASS	LIKELIHOOD	IMPACT	TOTAL RISK
Gillnets	5	5	25
Traps and pots	4	4	16
Fish Aggregating Devices	4	3	12
Hooks and lines	3	3	9
Bottom trawls	2	3	6
Mid-water trawls	1	2	2
Seine nets	1	2	2





# Best Practice Framework

## Stakeholder Actions



STAKEHOLDER GROUP	ROLE	BEST PRACTICE AREAS
Gear designers and manufacturers	Design, production and sale of fishing gear	Embedded traceability; research into, and use of / integration of biodegradable materials for use in the marine environment; incentives to return redundant / used gear.
Fishers	Individuals and crew catching seafood at sea	Reduced soak times; gear use limits in high-risk areas and during high-risk times; marking and identification of fishing gear; responsible storage of gear; reporting of lost gear, guidance on lost / abandoned gear location and retrieval.
Fisheries organisations	Non-statutory organisations representing fishers	Code of practices specific to fisheries; spatio-temporal agreements with other metiers; monitoring of fishing gear losses; communication protocols.
Port operators	Bodies operating and managing fishing ports	Accessible, low-cost gear and litter disposal facilities; integration into recycling initiatives; better awareness of responsible disposal opportunities; implement 'check out-check in' gear inventories where appropriate.
Fisheries managers and regulators	Management bodies setting policy, plans and regulations for fishing activities	Designation of spatio-temporal restrictions in high risk areas; development of appropriate gear marking and identification regulations; development of technical regulations to reduced ghost fishing potential in high risk areas; conducting impact assessment to gauge unintended consequences of management actions on gear loss and ghost fishing.







Scaling up  
solutions around  
the world





# Industry Engagement

**We will continue to positively engage with the fishing industry to:**

- Raise awareness about the ghost gear issue;
- Educate the industry on its global effects;
- Learn from the industry about how and why gear gets lost;
- Educate the public on the realities of gear loss (fishers are not villains in this story!);
- Develop innovative solutions to minimize gear loss and its impact if it is lost;
- Develop appropriate disposal options for recovered and end-of-life gear;
- Ensure solutions are viable, lasting and make sense for the industry.



# Recycling and Circular Economy



**Most fishing gear is made of  
highly recyclable material  
(i.e. PA6, PE, PP)**

**Biggest challenges are:  
consistency of supply,  
ensuring a clean enough  
feedstock to be recycled,  
transportation logistics to get  
material to recycling facilities**





# Case Study – Bureo



## Net Positiva - Chile

- Engaging with local fishers to provide an end-of-life solution for fishing nets
- Local fishers prepare the nets for recycling (cleaning, debris removal)
- Development of Netplus material (recycled PA6 pellets made of fishing nets)
- Innovative product design: sunglasses, skateboards, frisbees, Jenga Ocean, etc.
- Expansion into fishing communities in Brazil, Peru 2019/2020





# Case Study – Steveston Harbour



## Steveston Harbour Net Recycling Initiative - Richmond, BC

- Engaging fishers to clean, strip and bag end-of-life fishing nets (both PA6 and PE)
- No local recycling option at the time, so PA nets were shipped to Aquafil in Ljubljana, Slovenia; and PE nets were sent to Plastix Global in Lemvig, Denmark
- Now, local options are available in BC (SOP Recycle and Ocean Legacy Foundation)
- Potential to expand this program up the coast of BC and potentially Canada-wide





# Case Study – Ocean Legacy Foundation



## Ocean Legacy Foundation – Delta, BC

- Working with processors, fabricators and engineers to put together a line specifically focused on recycling marine debris, including end-of-life fishing gear.
- Working with businesses in the marine sector to identify sources of leakage along the coast.
- Providing a high tech recycling plant in BC to be able to process fishing gear and other marine debris would be a huge step forward in Canada.







**Some Gear  
Can be  
Recycled**



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# But Opportunities Remain...



- Crab/lobster traps/pots
- PP rope
- Multi-filament rope/line
- Steel rings
- Cable
- Cork line
- Lead line



# Innovation is Needed



fourth element

PLASTIX



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