

Impacts of fishing on the environment

Abandoned, Lost or otherwise Discarded Fishing Gear (ALDFG)

Sea based sources of marine litter

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Objectives of presentation:

1. FAO Fisheries & Aquaculture Department and Legal Office
 - Who we are and what we do
2. REGULATORY frameworks
3. FAO-FI - Abandoned, Lost or Otherwise Discarded Fishing Gears – ALDFG
4. Propose a roadmap for minimizing impacts of ALDFG

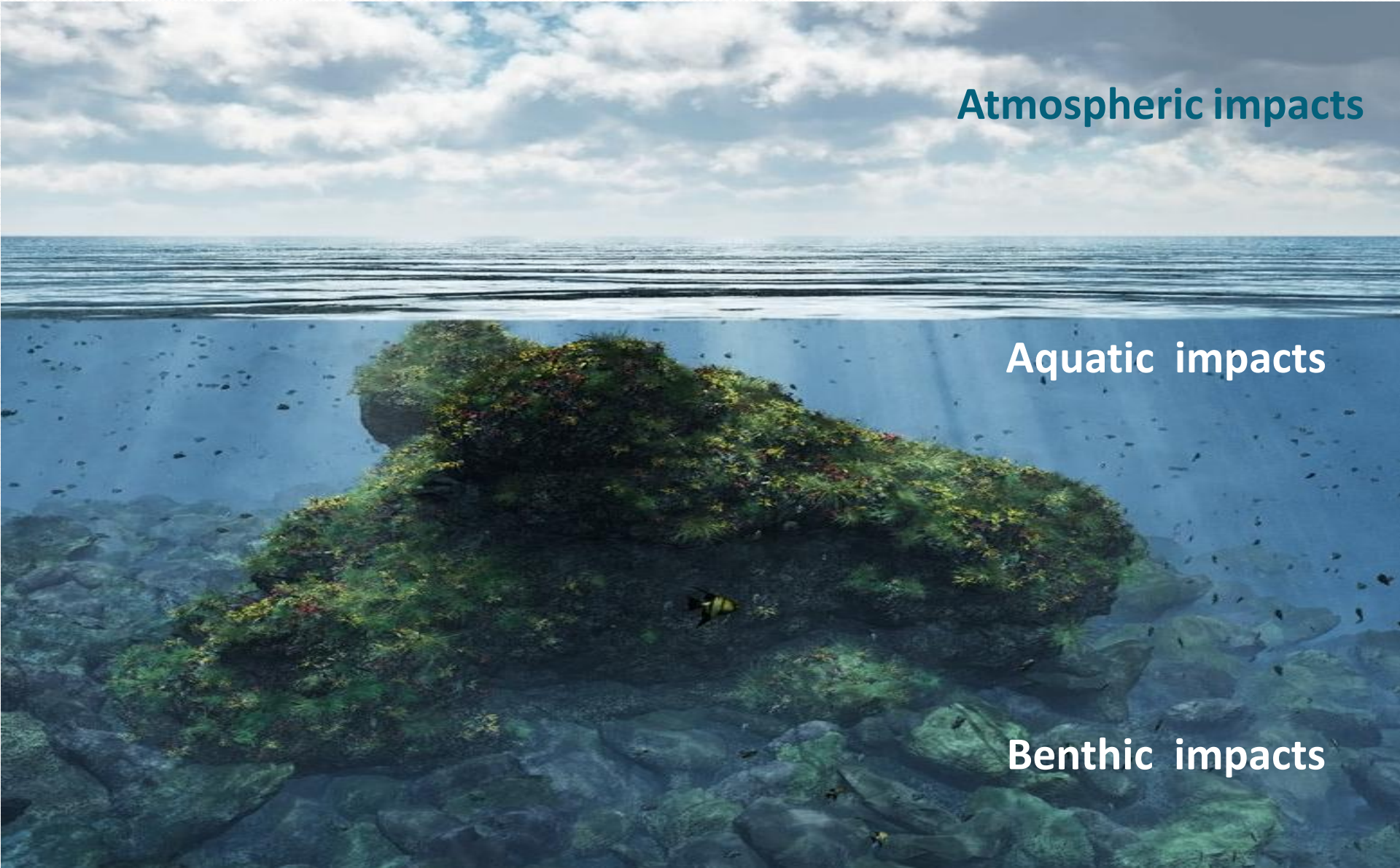


Environmental impacts from fishing

Atmospheric impacts

Aquatic impacts

Benthic impacts



Some examples of fishing impacts?



Smoke plumes from engines

Propeller scars caused by boats in a seagrass bed near the Florida Keys. NOAA/NOS.

FAO Fisheries and Aquaculture Department (FI):

The FI Department measures its achievements against the Organization's Five Strategic Objectives (SOs) which directly benefit FAO Members and stakeholders:

1. SO1 – Contribute to the eradication of hunger, food insecurity and malnutrition
2. SO2 – Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner

Work Area 1.1.2 Sustainable management practices for production systems that eliminate or reduce negative environmental and socio-economic impacts, while addressing the need for increased production

Work Area 1.2.1: Integrated approaches for ecosystem restoration and resilience

Work Area 1.2.2: Methods and technologies for adoption by producers in at risk and degraded environments.

Work Area 3.3.1 Facilitate the application of relevant international instruments at global, regional and national levels through supportive mechanisms and instruments .

3. SO3 – Reduce rural poverty
4. SO4 – Enable more inclusive and efficient agricultural and food systems at local, national and international levels
5. SO5 – Increase the resilience of livelihoods to threats and crises



FAO Legal Office (LEG):

The above also applies to LEG. In addition LEG contributes to:

- SO2:

- Output 2.1: Support to countries to analyse governance issues in transiting to sustainable production systems.
- Output 2.2: Support to countries to strengthen national governance frameworks providing an enabling environment for the adoption of more sustainable practices.
- Output 2.3: Support to countries to strengthen implementation capacities of public service organizations and inter-organizational mechanisms.

- SO3, output:

- Output 3.1: Support to strengthen capacities of stakeholders to participate in, update existing and develop or establish new international (including regional) mechanisms and instruments under the auspices of FAO.
- Output 3.2: Support to stakeholders to enhance recognition and consideration of the agriculture sectors in the international mechanisms, partnerships, processes, and instruments relevant to FAO's mandate but not under the auspices of FAO.
- Output 3.3: Support to strengthen capacities of global, regional and national stakeholders to facilitate implementation and application of international (including regional) mechanisms and instruments.



Regulatory framework for Minimizing impacts from fishing

Binding instruments

- **UN Law of the Sea Convention**
 - Duties of coastal states and flag states
 - Part VII –section II, Article 118
 - Part XII Protection of the marine environment – Articles 192, 194, 195, 196 and 197
- **MARPOL - Annex V**
- **Convention on Biological Diversity**
- **UN Fish Stocks Agreement**
Article 5 (d, f & g)
- **UNEP's Regional Seas Programme**
 - **Regional Conventions**



Framework for Minimizing impacts from fishing

Voluntary “soft law” instruments

- UNGA Resolutions
 - A/RES/59/25 – calls on FAO, IMO and UNEP to address ALDFG and related marine debris
 - A/RES/60/30 – lack of inf. – IMO to review MARPOL Annex V
 - A/RES/60/31 – better inf. and collaboration
 - A/RES/61/22 2– marine debris integration into national strategies
 - A/66/68
 - Section VIII on fisheries bycatch and discards
 - Section X Responsible fisheries in the marine ecosystem

Regulatory Framework for Minimizing impacts from fishing

FAO's voluntary instruments

1991 Voluntary Guidelines for the marking of fishing gear

- Address the recovery of lost and abandoned gear

1995 Code of Conduct for Responsible Fisheries (CCRF)

- Article 7.2.2: Minimize "Pollution, waste, discards, catch by lost or abandoned fishing gear"
- Article 8.4 prohibit destructive fishing practices
- 8.4.5 reduction of discards,
- 8.4.6 minimize loss of gear
- 8.4.7 assess habitat disturbance
- 8.5 Fishing gear selectivity
- 8.7 Protection of the environment
- 8.8 Protection of the atmosphere

- 2011 International Guidelines for bycatch management and reduction of discards
 - ghost fishing by ALDFG covered



Legal considerations

➤ These instruments, binding or non binding, require:

- translation/incorporation and
- implementation

into national law to become effective.



A roadmap for ALDFG Solutions

Technical aspects of ALDFG

Abandoned, Lost or otherwise Discarded Fishing Gear

- **Where?**
 - Primarily productive fishing grounds
 - But ALDFG can also drift drift
- **On what?**
 - Ghost fishing on food species, damage to benthos
 - Endangered, Threatened and Protected species
 - Safety and revenues from fishing
 - Plastics in the food chain
- **Impacts**
 - Waste of resources – Ghost fishing
 - Loss of biodiversity (cetaceans, seabirds, turtles etc)
 - Long term loss of productive fishing areas
 - Accidents, loss of life
 - Reduced fishing revenues

Type

Motivation/reason

Applicable measures

avoidance

curative

Abandoned
(deliberate non-retrieval)

- IUU fishing
Enforcement pressure
- Illegal gear
- Too much gear for time
Operational pressure

Improved port state measures

Discarded
(deliberate disposal at sea)

- Too much gear for space
- Chosen over onshore disposal
Economic pressure
- Damaged gear

Mandatory gear return

Lost
(accidental loss at sea)

- Gear conflict
Spatial pressure
- Misplaced gear
- Poor ground
- Extreme weather

Zoning schemes

Report losses

Avoid setting gear if identified/predicted

Gear marking

Retrieval programmes



Abandoned, lost or otherwise discarded fishing gear



Fishermen know the grounds, the seas and have vessels equipped to retrieve lost gear

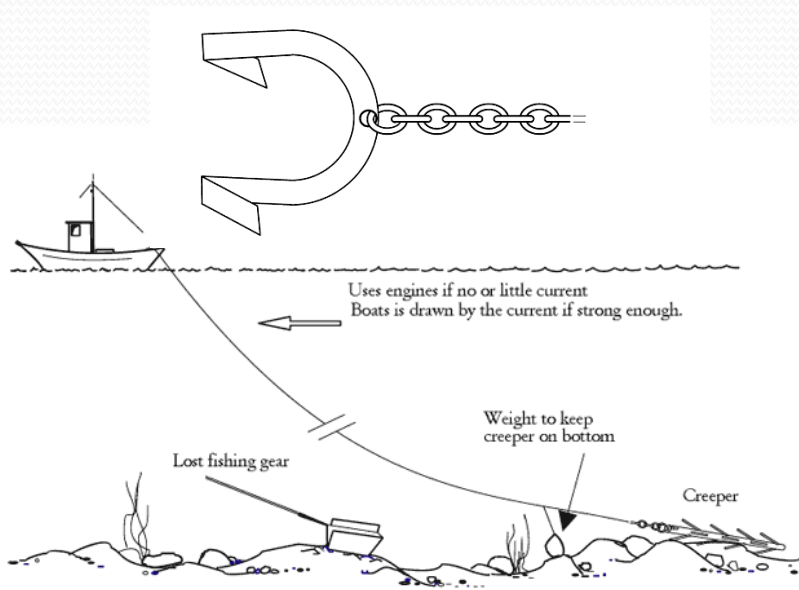
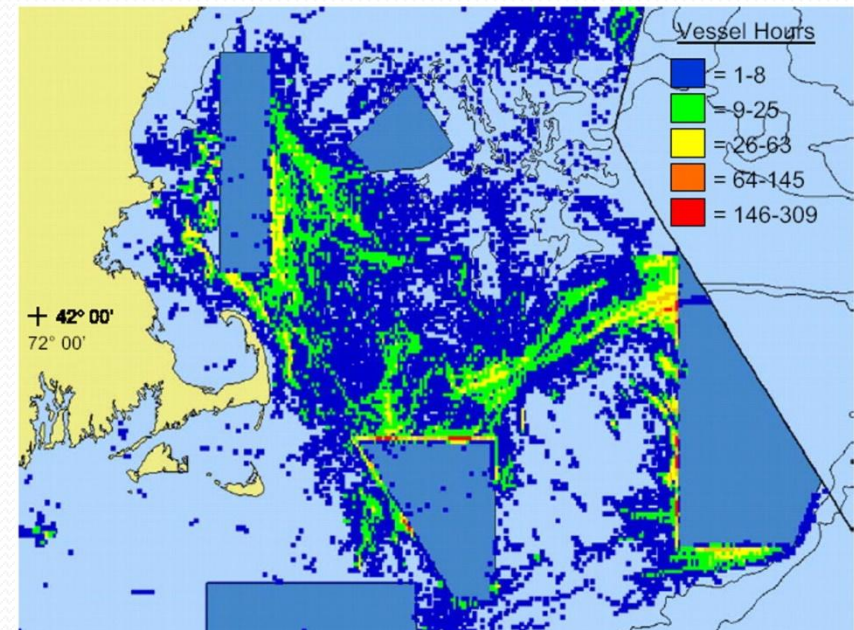


Figure 1 Arrangement for creeping for fishing gear



Murawski S A et al. ICES J. Mar. Sci. 2005;62:1150-1167

A participatory approach to ALDFG

- *Awareness Raising Programmes*
 - *Capacity Building to increase awareness among national fisheries authorities, regional fisheries bodies and fishing industry*
- *Improve Port reception facilities for derelict gear, mark fishing gears, encourage ALDFG be addressed in License Conditions*
- *Encourage reporting of lost gears – no penalty approach*
- *Incentivize Gear Clean up and gear removal*
- *Reviews/studies of legal frameworks in relevant countries*
- *Public-Private Partnerships for ALDFG Removal*
 - *The people with the most experience on fishing gears are fishermen – make them part of the solution*
 - *Reward them for social and environmental responsibility*
 - *Pilot project – for clean up and removal of ALDFG*

Elements of a pilot project for ALDFG retrieval

- Expert Workshop on industry-government clean up of fishing grounds and fishing ports
- Baseline study and site selection of candidate G77 country fishery for a public-private sector project for recovery and clean-up (+Development of indicators)
- Recovery/clean-up pilot project (Fishing community led)