Water and Environment Support
in the ENI Southern Neighbourhood region

Activity: WES N-E-DZ-1

Workshop on marine litter monitoring & mitigation

Showcases of best practice mitigation measures to address land-based sources of marine litter

Thomais Vlachogianni | **PhD. Environmental Chemist & Ecotoxicologist**
Senior MIO-ECSDE Policy & Programme Officer
Senior WES Marine Litter Expert / NKE
Member of the MSFD Technical Group on Marine Litter
Member of the UNEP/MAP CORMON Group
WP Leader of SOS ZEROPOL 2030

LDK CONSULTANTS S.A.

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ESTABLISHING A DERELICT FISHING GEAR MANAGEMENT SCHEME

This is a measure that aims to **reduce the amount of litter generated by the fisheries** and **aquaculture** sectors ending up in the coastal and marine environment. It refers to a scheme for the collection, sorting, transport, treatment, recycling/reuse and/or final disposal of fishing gear.

COMMON TYPES OF FISHING GEAR WASTE

fishing nets

lines

mussel socks

Abandoned, lost or otherwise discarded fishing gear is a **significant and very persistent type of marine litter** with numerous harmful effects on the marine and coastal environment and human livelihoods and well-being.

DIRECT AND INDIRECT CAUSES OF ALDFG

Direct causes	operational fishing factors such as weather making it more likely that gear will be left or discarded **illegal, unregulated and unreported fishing** gear retrieval and gear disposal costs **gear conflicts** vandalism and/or theft
Indirect causes	unavailability of onshore waste disposal facilities **accessibility and cost of use of onshore waste disposal facilities**

OBJECTIVES OF THE MEASURE

Enhance the understanding of the derelict fishing gear issue in the intervention area by assessing the types, quantities, sources and pathways. This is crucial information that needs to be considered when developing a fishing gear waste delivery system and management process.

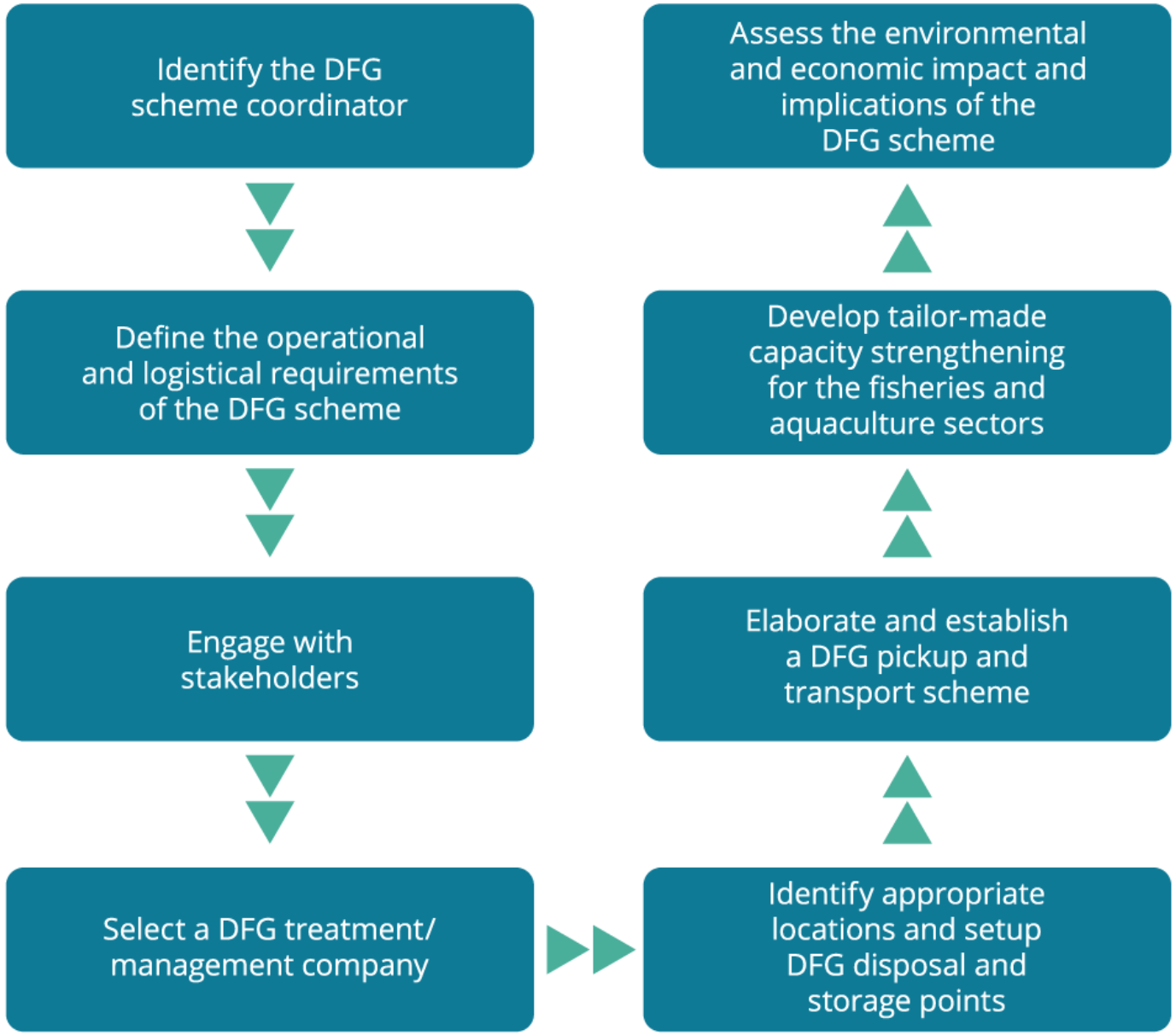
Raise awareness on the effects of derelict fishing gear and promote co-responsibility among the stakeholders involved in the fishing gear management process such as fishermen and fishermen's associations, aquaculture farmers and aquaculture associations, port authorities, waste management authorities and companies, divers and diving associations, local authorities, NGOs, fishing gear producers or traders, etc.

Promote best practices for the proper management and disposal of fishing gear on board and on land.

Restore coastal and marine ecosystems via targeted removal of derelict fishing gear in related hotspots; the removal and clean-up operations need to be done in an environmentally sound manner without posing any threat to habitats and species.

Improve public awareness on the issue of marine litter at large and on the issue of derelict fishing gear in particular and promote behavioural change towards more sustainable consumption patterns with regards to the reduction of the plastic footprint of citizens via informed consumer options.

KEY STEPS FOR SETTING UP A DERELICT FISHING GEAR SCHEME



THE STAKEHOLDERS

Fishermen and fishermen's associations

Aquaculture farmers and aquaculture associations

Port authorities

Waste management authorities and companies

Divers and diving associations

Local authorities

NGOs

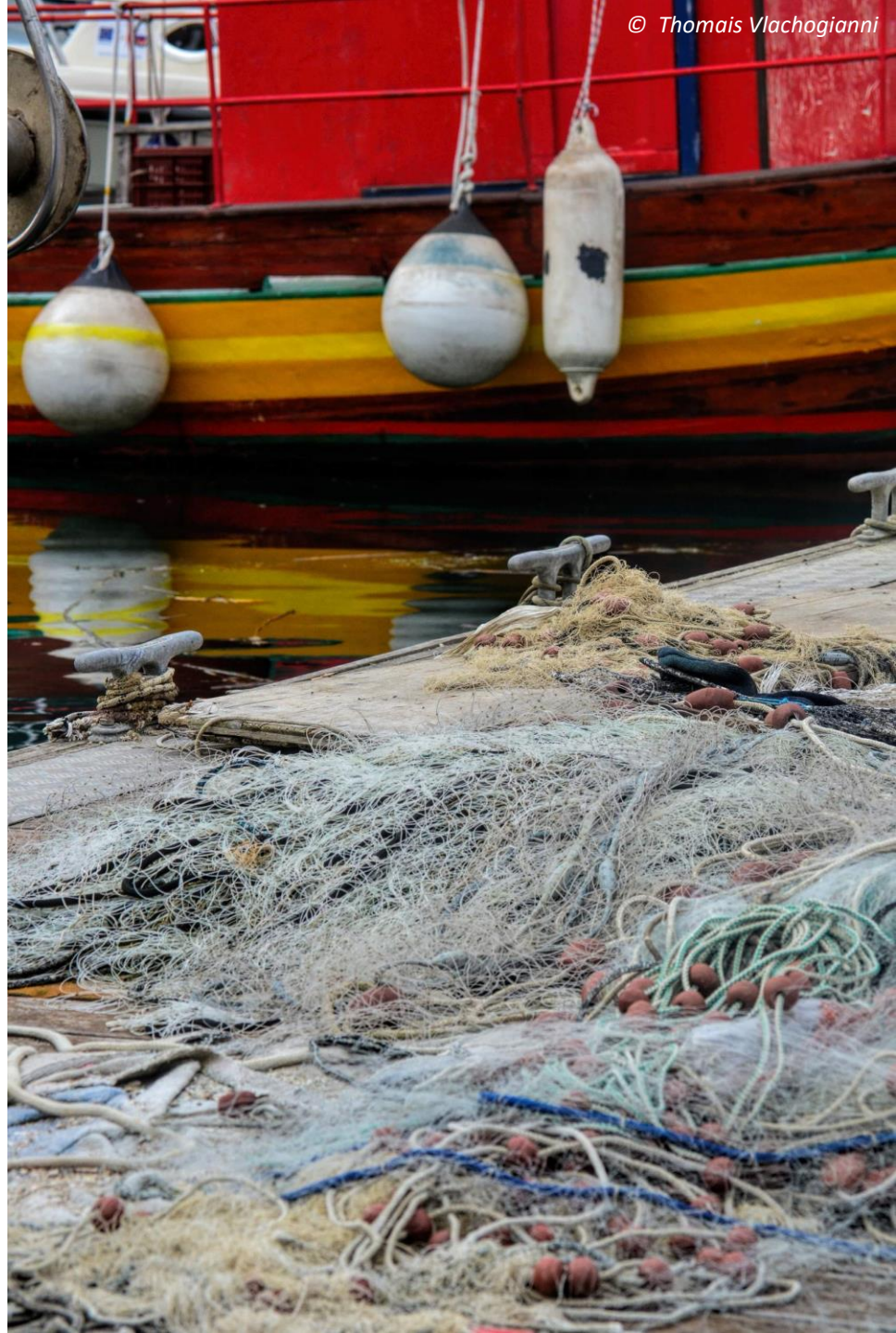
Fishing gear producers or traders

MPA managers

Chambers of Commerce

THE KEY OPERATIONAL ASPECTS OF A DERELICT FISHING GEAR SCHEME

- ✓ **The types, sizes, composition, quantities and condition** of derelict fishing gear or fishing gear waste discarded in the intervention area;
- ✓ **The end-of-life treatment options** for the collected fishing gear waste and any pre-treatment and/or sorting requirements;
- ✓ **The availability of facilities and infrastructure** for the collection, sorting and storage of derelict fishing gear or fishing gear waste;
- ✓ **The transportation options to the treatment plant** of the fishing gear waste and the transportation requirements taking into account odour considerations or whether the waste is containerized, etc.;
- ✓ **Special licences and/or permits** required for the disposal and transportation of the collected fishing gear waste;
- ✓ **The level of awareness and experience** of stakeholders in the intervention area on the issues addressed by the derelict fishing gear scheme and their willingness to join the scheme;
- ✓ **Existing waste management schemes** and management plans in the intervention area;
- ✓ **The need for clean-up and removal operations** of derelict fishing gear in hotspots located in the coastal and marine environment.
- ✓ **Environmental and economic implications** of the scheme.



SELECTING A DFG MANAGEMENT COMPANY

Fishing gear waste is a complex waste stream to work with. Fishing gear consists of many different materials that are difficult or costly to separate. In addition, fishing gear often contain sand or mud, biological organisms and may be contaminated with antifouling coating, which often contains heavy metal residues (Brocbeck, 2016) and this influences the purity of the material and thus the recycling potential. Thus, there are limitations as to what can be recycled and what can be recycled profitably.

MAIN END-OF-LIFE OPTIONS THAT HAVE BEEN REPORTED FOR FISHING GEAR WASTE

Mechanical recycling that can only be performed in dedicated fishing gear recycling facilities.

Chemical recycling that can only be performed in dedicated fishing gear recycling facilities.

Thermal processing.

IDENTIFYING APPROPRIATE LOCATIONS FOR SETTING UP DFG DISPOSAL AND STORAGE POINTS

An on-site visit to the intervention area and to any fishing ports and/or marinas in the vicinity **is required in order to carry out an extensive mapping of potential locations for the disposal of fishing gear waste.** This mapping should be thoroughly discussed and enriched with the involvement of all stakeholders, in particular the port authorities, waste management authorities, the fishermen and aquaculture farmers. **Port and waste management authorities can provide adequate, affordable and accessible derelict fishing gear reception and storage facilities or move collected fishing gear waste to a central storage facility or area in the port.** They might also help out with the arrangements for the transport, disposal and recycling of fishing gear waste together with other waste brought by ships or produced at the port.

ELABORATING AND ESTABLISHING A DFG PICKUP & TRANSPORT SCHEME

The disposal, pick-up and transport scheme of fishing gear waste should be organized in such a way that will ensure that the fishermen and aquaculture farmers and all involved professionals will experience minimal business disruption. When designing pick-up and transport routes, leveraging existing operations, such as existing schemes for the transport of waste brought by ships or produced at the port, could maximize efficiency, decrease business disruption and minimize environmental impact.

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Thank you for your attention!

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