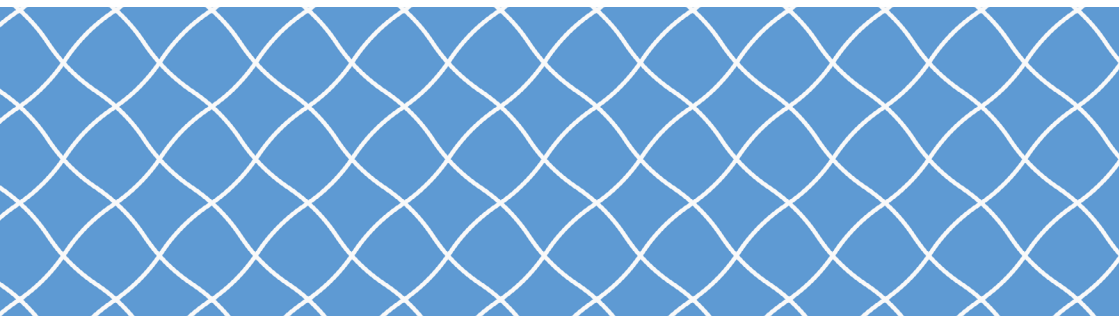


THIS IS MARELITT Baltic

Reducing the impact of marine litter in the
form of derelict fishing gear in the Baltic Sea



WHAT IS THE PROBLEM?

Derelict fishing gear (DFG) is addressed worldwide as a source of marine litter with extensive hazardous effects on the marine ecosystem. From 5.500 to 10.000 gillnets and trawl nets are lost every year and despite intense media focus – the problem is poorly known in the fisheries industry and among politicians.

Common reasons for gear loss are fishing near commercial shipping or in a so-called conflict area, where both nets and trawls are used. For example, when these two types of gear crosses, the trawl can sometimes break the more vulnerable net. The fishing gear is sensitive and unknown seabed objects, the lack of knowledge of wreck positions or deliberate fishing near a wreck can also cause gears to become snagged or lost.

The derelict fishing gear have a wide range of identified impacts and consequences. The environmental and economic aspect includes “ghost fishing” where DFG continues to catch fish and other marine wildlife a long time after it has been lost. Research indicates that the DFG that remains at the sea bottom or at wrecks can catch amounts up to 20 percent (compared to normal fishing capacity) during the first three months. Even after two years there is still a fishing capacity of up to 6 percent.

But there are also safety risks. These risks include entanglement of divers, boat propellers but also birds if the DFG is located at shallow waters or at the surface.

In the long term DFG turn into a potential health risk as degrading nets become micro plastics and a part of the food chain. As this happens they might also release hazardous materials (from lead used in leadlines) into the environment. The microscopic litter is not collectable with present technologies while macroscopic - DFG in early state - is one of the most cost-efficient removable sources of marine litter.



WHY MARELITT BALTIC?

The MARELITT Baltic project will be one of the first transnational initiatives in the world to provide an operation oriented all-in-one solution for how to approach DFG. It will turn a diffuse problem into a clear and apprehensible topic that can contribute to an enhanced international readiness to act.

The aim is to develop cost-efficient, safe and environmentally friendly cleaning-, prevention- and recycling methods for DFG that is retrieved in both open water and on wrecks. These will be identified through demonstrational dragging and diving operations for sampled targets such as soft sea bed, rocky bottoms, wrecks etc. It will also include an environmental impact assessment analysis for DFG retrieval operations in the sensitive seafloor habitats of the Baltic Sea.

MARELITT also aims to increase responsible fishery while developing a code of conduct for the fishing industry. Other objectives include the improvement of fishing gears for responsible fishing and a minimization of the DFG problem.

As a result, a handbook on DFG retrieval methodologies consisting of the evaluation of dragging operations and documentation of lessons learned will arise. MARELITT will also constitute a baseline for future cleaning measures while gaining an overview on host areas in the Baltic seafloor in form of a map and developing a plan for post project operations that can be used by other countries and organisations in the future.

All project activities, outputs and results will create the basis for future dragging and diving operations to remove lost fishing gear from the Baltic Sea. MARELITT Baltic will contribute to a decrease of marine litter and hazardous substances in the Baltic Sea and will support the sustainable treatment of derelict fishing gear.



Causes

Consequences

The approach of MARELITT Baltic

DERELICT FISHING GEAR

Gillnets and trawls are the most common but not the only type of gears that are lost. E. g. fyke nets are lost in certain areas.

REASONS FOR GEAR LOSS

Lost gear can be "snagging" on sea bed objects, rigged ice, non-fishing vessels running over flags and conflicts between bottom trawling and gillnetting.

WRECKS

Lack of knowledge of wreck positions or deliberate fishing near wrecks causes nets and trawls to become snagged or lost.

SEA BIRDS

Sea birds can become entangled in nets floating close to the surface or deployed in shallow water.

GHOST NETS

Ghost nets can in certain circumstances continue to fish for decades. Aside from fish, larger mammals may be trapped.

DIVERS

Wrecks covered with fishing gear are an insidious threat for divers.

BOAT ENGINE

Lost fishing gear can get entangled in propellers and cause damage.

MICROPLASTICS

Ghost nets degrade into microplastics which enter the food chain and cause harm to sea life.

RECYCLING

Survey of harbourside recycling facilities and economic solutions for the disposal of derelict fishing gear.

PREVENTION

Focus on changed attitudes toward mitigation oriented solutions, increased voluntary reporting of gear loss and improved fishing strategies and technology.

CLEANING

Develop environmentally safe methods for cleaning wrecks.

DRAWING

Identify and map derelict fishing gear host areas for dragging operations and present a post-project cleaning plan.

HOW DOES IT WORK?

The project is divided into five work packages (WP), where package 2, 3 and 4 are the major parts concerning the cleaning, prevention and recycling of lost fishing gear.

The aim of WP 2 is to plan and execute DFG retrievals in Sweden, Estonia, Poland and Germany both on the seafloor and wrecks. The activities will be based on methodologies and techniques tested in earlier national projects. These experiences will contribute to a common methodology which is crucial given the extreme hydrographic and morphological variation in the Baltic Sea. The new operation platform will make cleaning operations both transparent and demonstrate if the task is physically possible.

The aim of WP 3 is to develop an overall approach to mitigate the problem of lost fishing gear in the future. It can roughly be divided into three types of actions. Firstly, the project will increase knowledge on fishing technological and strategic changes over time and how these changes have influenced the evolution of gear loss.

In the second step, the project will focus on the potential causes to why fishing gears are lost. The third category of action includes development of preventive methods such as gear marking technologies helping to track irresponsible fishermen or assisting responsible fishermen to locate lost gears.

The aim of WP 4 is to identify the options for a safe and fully sustainable handling and recycling of the lost fishing gear in a circular approach. Within this work package the phase from reaching the harbour through cleaning, sorting, transport until processing of recycling of the nets will be dealt with. The work encloses a variety of approaches such as creating a knowledge baseline about the transnational status and capacities of harbours, waste handling systems and industries in the Baltic Sea countries.

RECYCLING WP4

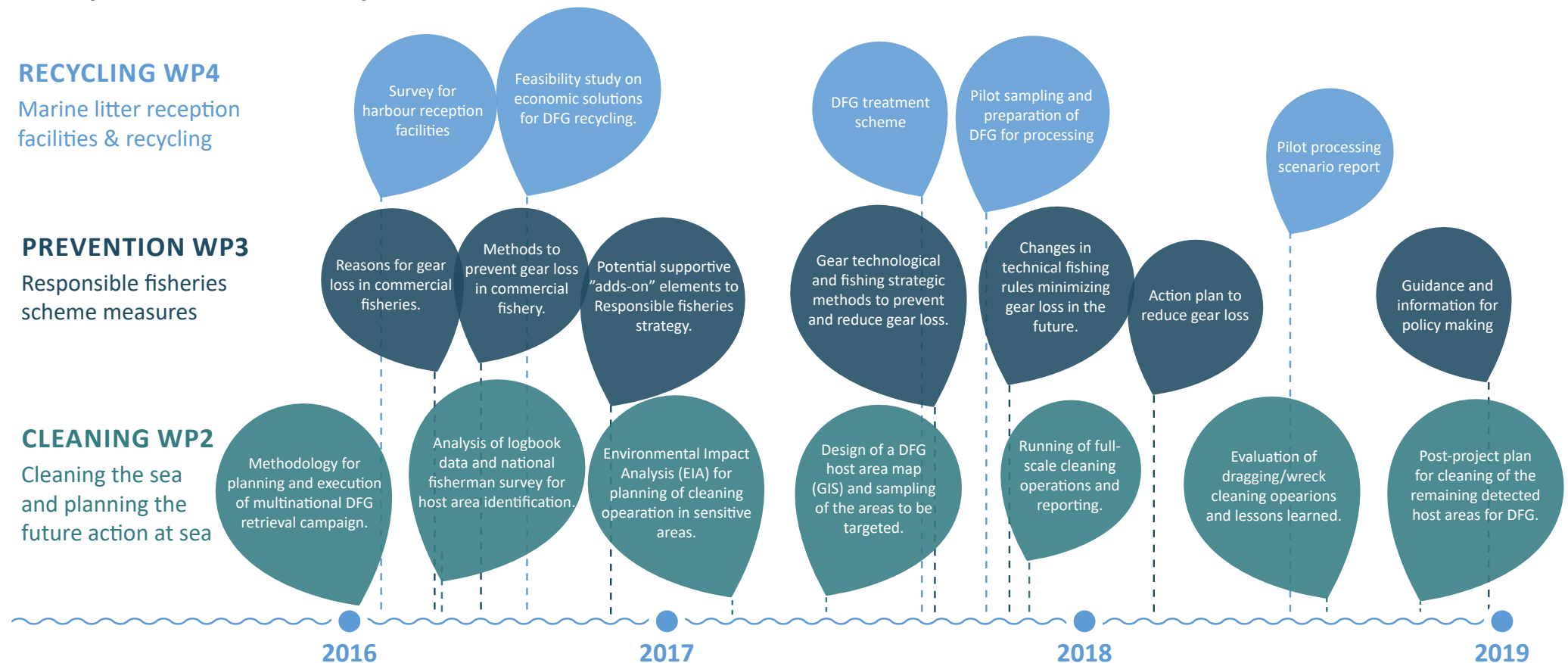
Marine litter reception facilities & recycling

PREVENTION WP3

Responsible fisheries scheme measures

CLEANING WP2

Cleaning the sea and planning the future action at sea



PROJECT PARTNERS

Municipality of Simrishamn, Lead partner (SE)
Keep the Estonian Sea Tidy (EE)
WWF Poland Foundation (PL)
WWF Germany (DE)
Keep Sweden Tidy (SE)
Maritime University of Szczecin (PL)
Kolobrzeg Fish Producers Group (PL)
Institute of Logistics and Warehousing (PL)
Estonian Divers Association (EE)

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