

**Policy Brief**

# **CLEAN NORDIC OCEANS**

**– a network to reduce marine litter and  
ghost fishing**



**Nordic Council  
of Ministers**





Clean Nordic Oceans

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Photo: Arild Hareide,  
Runde Miljøsen



Photo: The Norwegian  
Directorate of Fisheries



# Introduction

Marine litter is not a new challenge, but it has become increasingly visible in many parts of the world. Visibility has led to increased focus on many different levels. What is frightening in this context is that, although visibility has increased focus, there is broad consensus that the predominant proportion of marine litter is not visible but has sunk to the bottom. Increased use of plastic products and materials with a long decomposition time is the main reason why accumulated litter is becoming increasingly visible, together with a lack of systems for handling recovered marine litter.

Every year, around 8 million tonnes of plastic goes into the world's oceans. Furthermore, it is estimated that around 640,000 tonnes of fishing gear is lost each year. There are no figures on how much fishing gear is lost, left on the seabed or thrown into the sea in the Nordic region. Professional and recreational fishing vary in scope and intensity in the Nordic countries, but there is reasonably good cause to argue that the challenges are also great in the Nordic region.

The countries of the Nordic region share many common features. At the same time, there are large differences in climate and natural conditions that both affect and impose conditions on fishing, often in a way that affects the risk of fishing gear being lost. There are also many other factors where there are large difference between the Nordic countries, such as fleet structure, fishing grounds, port structure and the extent of recreational fishing.

Lost fishing gear or pieces of fishing gear have an unfortunate effect on marine life and can contribute to both suffering and unethical death through ghost fishing. It is important, therefore, that these challenges addressed.

Clean Nordic Oceans, as a project and knowledge network, was established in 2017 through the Nordic Council of Ministers, as a Norwegian Presidency project. Clean Nordic Oceans has been led by Norway, with Denmark and Sweden in the management team. The purpose of the project was to establish a Nordic network for exchanging knowledge and experience in order to reduce the risk of ghost fishing and marine litter from fishing gear, and to promote increased recycling and reuse.



Photo:  
Pekka  
Kotilainen  
→



Photo:  
The Norwegian  
Directorate of  
Fisheries  
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## Nordic status and knowledge base

The Nordic region has also intensified its focus on this challenge as a consequence of the global focus on marine litter. However, there is no basis on which to argue that there is an equally strong focus on fishing gear as the source of marine litter. Here, the variations between the Nordic countries appear to be greater than would be suggested by actual variations in the importance of fisheries. Lost or discarded fishing gear is often comprised of plastic components that may pose a risk to marine life. Measures must therefore be prioritised accordingly.

The primary function of Clean Nordic Oceans can be expressed in simple terms as knowledge acquisition and knowledge sharing. Through this work, we have obtained a relatively clear picture of the Nordic status in terms of both knowledge and measures. To a large extent, this must be attributed to contributions from committed players in the network. Many Nordic countries need national solutions

that are adapted to their fisheries. However, there are also many common factors related to this issue where there is strikingly little knowledge-sharing through the use of each other's systems, methods and measures.

Nevertheless, there is a wealth of Nordic knowledge on this issue. In addition, new knowledge is continuously being acquired as a result of ongoing projects in many Nordic countries. Knowledge transfer from countries outside the Nordic region is also an important source, as many challenges are comparable, although solutions must be adapted and modified.

With the knowledge that both professional and recreational fishing are significant contributors to marine litter, it would not be wrong to claim that there is a good knowledge base, but it does not reach the relevant stakeholders or it is not sufficiently used as a basis for marine management decisions.

## Key findings

Clean Nordic Oceans is not a research project where findings are presented with accompanying documentation. These are findings that have emerged as a result of our networking work and contributions from experts at workshops and conferences. The findings reflect the Nordic region.

### Finding 1

Nordic countries have a low overview of the quantity and location of lost fishing gear. Although there are regulations with reporting requirements, few countries have functioning systems for reporting

lost fishing gear from professional and recreational fishing. This is apparent from absent or abnormally low loss figures in relation to the country's total fishing activity and type of fishing. This under-reporting is unfortunate in light of the knowledge that fisheries and recreational fishing constitute a significant proportion of the marine litter from sea-based sources.

### Finding 2

Nordic countries focus little or no effort on removing lost fishing gear. The lack of effective reporting solutions weakens



Photo:  
The Norwegian  
Directorate of Fisheries  
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the basis for carrying out rational and cost-effective clean-up operations, but the challenges surrounding lost fishing gear remain the same. With the available knowledge of ghost fishing and decomposition time, this is both unethical and unfortunate. Only one country carries out annual clean-ups, while a few countries carry out project-based efforts to remove lost fishing gear.

### **Finding 3**

There is a significantly greater risk of losing passive fishing gear (e.g. gillnets, pots and fish traps) than active fishing gear (e.g. trawls, purse seines and Danish seines). Experience-based knowledge clearly demonstrates this fact. This is also natural in view of the fishing methods themselves. However, it is important to emphasise that, while the risk is greatest for losing passive fishing gear, components from active fishing gear are over-represented in fishery-related beach litter, such as dolly rope, among other things.

### **Finding 4**

Awareness-raising initiatives appear to be insufficient in all Nordic countries. The reason that smaller pieces of fishing gear end up in the sea as a result of e.g. repair work is probably due to a mixture of conscious and unconscious actions, partially attributable to a lack of routines and partially to prevalent attitudes. Ghost fishing and other consequences of lost gear can harm and, at worst,

cause the death of marine animals. This is under-communicated and does not receive enough attention in either commercial or recreational fishing.

### **Finding 5**

Significant differences between Nordic countries in terms of organised and in some places lacking reception solutions for recovered and scrapped fishing gear. Countries with few but major central fishing ports have established good reception solutions. Countries with a larger range and number of ports do not have solutions that are satisfactory and comprehensive, especially for the less mobile part of the fishing fleet. There are also some major differences in terms of national infrastructure and coordinated terms for delivering fishing gear.

### **Finding 6**

Major challenges relating to the reuse and recycling of fishing gear in general and to recovery of lost fishing gear. It is possible to reuse recovered fishing gear and components from scrapped fishing gear, but operating costs make it difficult to establish a system for this. Recycling of fishing gear is generally costly because gear must be disassembled and prepared for recycling, and because some products cannot be recycled. For recovered fishing gear, there is an additional challenge related to the incorporation of foreign particles and biological material into the gear.

# Measures

Based on findings and the knowledge gained from the project, it is recommended that each country carefully consider the measures below. These are measures that could help reduce ghost fishing and marine litter from fishing activities and recreational fishing. This is a brief presentation and the measures are described in more detail in the main report of the project. How these measures should be followed up may be the same for several countries, but for other measures this will be more country-specific.

## General measures

**Awareness and attitudes.** There is a need to increase knowledge in all Nordic countries with regard to the consequences of lost and abandoned fishing gear. In particular, this includes a lack of procedures, which results in smaller components of fishing gear finding their way into the sea. Increased knowledge will contribute to greater awareness of the challenges.



Photo: Plastix AS



**Regulations and legislation.** There is a general need for a review of whether national regulations related to this issue achieve their intended effect. New measures may be needed such as orders to implement escape solutions on fish pots and a prohibition against fishing on wrecks.

## Measures at sea

### **Making the position of fishing gear visible.**

There is a need for better "visibility" of the position of gear in order to reduce the risk of cutting off surface floats and of gear collisions. It is recommended that solutions are implemented for reporting or notifying in a way that is made digitally visible to other users of the sea. At the same time, compliance with the FAO's guidelines for marking fishing gear is encouraged.

### **Marking fishing gear on the seabed.**

Marking fishing gear will increase the responsibility for reporting in the event of loss of gear. This will also increase the possibility of returning the gear to the owner and hence reuse.

**Improvement of procedures.** For recreational anglers, there is a need for increased skill in the use of gillnets, fish pots and fish traps. Increased skill reduces the risk of losing fishing gear. For commercial fishermen, such a need will be aimed mainly at improving procedures and attitudes towards residual waste when working on gear.

**The position of lost fishing gear.** There is a clear need for requirements for reporting loss position through a simple and intuitive tool for fishermen. This would be a rational way of gathering the necessary information and knowledge.

**Retrieving lost fishing gear.** Fishing gear on the seabed can be a danger to marine life, and it is marine litter with a long decomposition time, which should be removed from the seabed. There are methods that can be used to accomplish this, but they must be adapted to national needs and coordinated with systems for reporting loss positions for lost fishing gear.

## Measures on land

**Reception and handling.** It is recommended that solutions are facilitated that allow recovered and scrapped fishing gear to be delivered in fishing ports. This reduces the risk of gear being unaccounted for. Solutions that contribute to reuse and recycling should be stimulated so that incineration and landfills are the last possible solution.

**Material and design.** There is a strong need for increased focus on material selection for fishing gear. Catch efficiency should be ensured through the development of solutions that can also help reduce plastic components in fishing gear and increase the use of degradable solutions and product compositions that are easier to recycle.



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### **Nordic co-operation**

Nordic co-operation is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, the Faroe Islands, Greenland, and Åland.

Nordic co-operation has firm traditions in politics, the economy, and culture. It plays an important role in European and international collaboration, and aims at creating a strong Nordic community in a strong Europe.

Nordic co-operation seeks to safeguard Nordic and regional interests and principles in the global community. Shared Nordic values help the region solidify its position as one of the world's most innovative and competitive.

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Clean Nordic Oceans was established as a network to exchange knowledge and experience of methods and measures that can reduce the risk of ghost fishing and marine litter, and increase proper disposal and recycling of commercial and recreational fishing gear. All Nordic countries have participated in the network.

Through a dedicated website ([www.cnogear.org](http://www.cnogear.org)), workshops, seminars, conferences, films and social media, this project has helped to establish contacts both inside and outside the Nordic region, which can help reduce the challenges of marine litter from fishing activities.

Among the numerous important findings that have been made over the course of the project, the report points out that fishermen in all the Nordic countries lack sufficient awareness of how they can and should contribute to a cleaner ocean. The report proposes a number of possible measures. Some of the measures may be suitable for all countries, but in general, there is no "one size fits all" solution.