

Towards a good state of the Baltic Sea

Programme of Measures of Finland's Marine
Strategy 2022 – 2027 in a nutshell



The Baltic Sea is our unique northern sea. It provides us with opportunities for livelihoods and recreation.

The Baltic Sea is not well, however. To improve the state of the sea, the Ministry of the Environment has together with an extensive network of experts drawn up a Programme of Measures for the period 2022 – 2027. The Programme of Measures is part of the Marine Strategy, which is updated every six years. In addition to the Programme of Measures, the Marine Strategy includes an assessment of the state of the sea (previous assessment from 2018, a new one will be published in 2024) and a monitoring programme (update due in 2026).

The Programme of Measures of the Marine Strategy contains 63 new measures to improve the state of the sea. Key measures can also be found in the programmes of measures of the river basin management plans, which present measures carried out in the catchment area. In addition to the national programmes of measures, the Baltic Marine Environment Protection Commission HELCOM has the Baltic Sea Action Plan, which was updated in 2021. Its measures are implemented in all countries in the Baltic Sea region, including Finland.

Eutrophication is the most significant and challenging problem concerning the Baltic Sea. Nutrients ending up in the sea from agriculture, communities, forestry, ships and fish farming result in increased algal production. As a result, blue-green algae blooms increase, the oxygen conditions at the bottom of the sea deteriorate, the water becomes murky and the shores are taken over by reed. The nutrients that have been accumulating at the bottom of the sea for decades slow down the recovery of the sea. In addition to eutrophication, the marine environment also suffers from harmful substances and litter. Ship traffic, boating and shoreline construction cause noise, erosion of shores and the seabed, and disturbance to the marine environment. Fishing affects the fish stocks of the Baltic Sea and hunting the marine birds and mammals. Biodiversity is also declining at an alarming rate, which is why we have to restore and protect habitats, for example, by establishing protected areas.



In the future, the pressure to use the sea will only be growing, and e.g. the increasing offshore wind power poses new challenges to the environment of the Baltic Sea. Reconciling the different forms of using the sea in a way that does not put achieving a good state of the marine environment at risk will therefore be even more important in the future. The objectives of the Marine Strategy should also be taken into account when planning the sustainable use of the sea, which is done especially in maritime spatial planning.

To reduce the pressures on the marine environment and to improve the state of the sea, we need measures both in the catchment area and at sea. In the past few years, government of Finland has invested in water protection with programmes such as the Water Protection Programme funding marine and water management measures and NOUSU programme restoring rivers. HELMI habitats programme has included restoring small coastal bays. The Archipelago Sea Programme improves the state of the Archipelago Sea.

Everyone from private individuals to companies and from authorities to NGOs are needed to implement the measures. This leaflet describes the measures that have been included in the Marine Strategy with the aim of improving the state of the Baltic Sea. They include measures that we can all take.



More detailed information about the Marine Strategy and protection of the sea

- [Programme of Measures of Finland's Marine Strategy 2022 – 2027 \(abstract in English\)](#)
- [Water and marine management plans \(link in Finnish\)](#)
- [HELCOM's Baltic Sea Action Plan](#)
- [Maritime Spatial Plan for Finland 2030](#)

EUTROPHICATION

Eutrophication happens when nutrients, phosphorus and nitrogen, accumulate in waters as a result of human activity. In waters they increase growth of harmful algae and aquatic vegetation and other consequent phenomena. By far the largest amount of nutrients comes to both inland waters and the sea from agriculture, but many other sectors also cause nutrient loading to our waters.

Efforts to reduce the nutrient load have already been made for a long time. Environmental legislation helps to limit nutrient emissions from wastewater treatment plants, fish farms, industry and peat production, but also from agriculture, forestry, sparsely populated areas and shipping. The loading from agriculture is mitigated especially with the Nitrate Decree and the

Phosphorus Decree, which set upper limits for the use of nitrate and phosphorus in fertilisation. One of the aims of the agricultural subsidy system is to reduce nutrient loading. Water management measures, such as the gypsum treatment of fields, are taken in the catchment area. More detailed information on nutrient reduction measures taken in the catchment areas can be found in the water management plans. Currently, extensive work is currently done to develop recycling of nutrients from both manure and wastewater. The recycling of nutrients is important, not only for the protection of waters but also the security of supply.

The Programme of Measures of the Marine Strategy includes several measures that reduce the nutrient loading and they complement the measures taken in river basin management.

Key actors

Ministry of Agriculture and Forestry, Ministry of the Environment, Ministry of Transport and Communications, ELY Centres, Finnish Transport and Communications Agency, Finnish Environment Institute, Natural Resources Institute Finland, Central Union of Agricultural Producers and Forest Owners, John Nurminen Foundation, Keep the Archipelago Tidy Association, agriculture and forestry entrepreneurs, fish farmers and fishermen, municipalities, private individuals

Measures to reduce the nutrient loading

We will reduce the impact of food production and consumption on waters

- By encouraging everyone to eat more plant products and wild fish and to reduce food waste
- By encouraging farmers to try different soil improvers on fields, such as gypsum, structural lime and fibre products
- By promoting nature-based activities, such as the construction of wetlands and depressions for floodwater, aimed at restricting the flow of water especially in flood-sensitive areas.

We will promote the recycling of nutrients

- By accelerating the production of biogas from manure and other organic materials, further processing of digestate from biogas production into fertilising products and utilisation of nutrients from sewage sludges.

We will test new methods for managing nutrient storags in the sea.

- By examining the possibilities to remove nutrients from the sea, including the bottom of the sea, with different methods that are currently in the experimental phase, for example, by collecting the dead algae and aquatic plant biomass drifting to the shoreline.

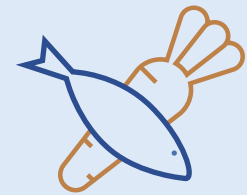
We will reduce the nutrient emissions from shipping and boating

- By surveying the amount of wastewater and food waste generated on cargo and passenger ships and by promoting their international regulation
- By improving the loading practices in sea transport of fertilisers to reduce the emissions caused by them
- By promoting the acquisition of wastewater reception facilities at marinas.

We will improve the impact assessment of activities that cause loading to the sea

- Advanced modelling tools help up to better assess the impacts of the different measures on the state of the Baltic Sea.

What can you do?



Eat vegetables and wild fish from the Baltic Sea. Avoid food waste!



If you go boating, always empty the content of the septic tank to the reception facilities.



If you live or have a summer house by water, make sure that nutrients do not get into the sea from the kitchen garden, toilet, sauna or dishwater.



You can collect the filamentous algae accumulating in the shorewaters at the summer house and compost it, for example.

PROTECTION OF BIODIVERSITY

A good state of the marine environment in the Baltic Sea is the core objective of the Marine Strategy, and marine biodiversity and its protection are a cross-cutting theme in the entire Programme of Measures. Eutrophication and many offshore activities, such as dredging, construction and boating, usually have a negative impact on the marine environment. Sensitive species and habitats suffer and, at worst, disappear completely from areas with a lot of human activity. Marine biodiversity has been surveyed in Finland since 2004 within the framework of the VELMU programme, so we know the marine environment well.

Establishing protected areas is one way to safeguard marine biodiversity. In Finland, the marine protected areas currently cover approximately 11% of Finland's sea area. However, Finland has committed itself both at the global and the EU level to a protection target of 30% by the year 2030, of which 10% will be strictly protected. From the point of view of biodiversity, in addition to their surface area, the areas must also be efficiently protected and managed.

The state of the marine environment will also be improved by restoring habitats and by drawing up management plans, especially for endangered species and habitats. Regarding commercially exploited fish stocks, it is important to determine a sustainable fishing pressure.

Key actors

Ministry of the Environment,
Ministry of Agriculture, Parks
& Wildlife Finland, ELY Centres,
Finnish Environment Institute,
Natural Resources Institute Finland,
municipalities and hunting and
nature protection communities,
private individuals



Measures to protect biodiversity

We will strengthen the network of protected areas at sea

- By expanding the network of marine protected areas and by enhancing protection in already existing protected areas
- By examining the functioning of the current legislation in protecting the marine environment.

We will restore underwater habitats

- By drawing up restoration plans covering the entire network of protected areas and implementing measures in areas that require restoration
- By restoring underwater habitats (e.g. eelgrass and charophyte meadows) and managing reed belts, taking into account biodiversity perspective
- By carrying out fisheries restoration in coastal areas, especially in the breeding grounds of perch and pike, sea-spawning whitefish and grayling.

We will prepare management plans for endangered marine species and biotopes

- By drawing up programmes of measures for endangered marine species and biotopes
- By continuing the protection of Finland's southern Baltic ringed seal population by drawing up a management plan and implementing it
- By updating the national Eel Management Plan.

We will define sustainable fishing pressure for coastal fish

- Limits for sustainable fishing will be set for coastal fish species, such as pike-perch, perch and whitefish.

We will increase knowledge of seabirds and improve their habitats

- By conducting studies on birds in the shallow offshore areas that are important to sea birds and by developing the monitoring of archipelago birds in the inner archipelago
- By enhancing hunting of invasive alien predators such as the raccoon dog and the mink, especially in the protected areas on the coast.

What can you do?



Respect the restrictions on access to the protected areas and other rules.



When you are fishing, take into account the fishing restrictions and recommendations.



Private individuals can also protect sea areas. If you own sea areas or are a shareholder in a joint property management association and are interested in establishing a protected area, contact the ELY Centre.



If you are worried about the state of the water area of your own fishery collective or joint property management association, you can find out about the possibilities to restore the area, for example, from the ELY Centre..



MARINE LITTER

Litter in the Baltic Sea is a growing problem. Many types of litter last very long – for example plastics can remain in the sea for up to hundreds of years. When they degrade, plastics break down into smaller microplastics that are invisible to the eye. Persistent and toxic compounds may then bind to them and enter the foodweb.

In Finland, the amount of litter on the shores has been monitored since 2012. The amount of microplastics in the sea is also monitored and the monitoring of litter on the seabed is currently being developed. The most common litter found on the seashores is different plastic and foam plastic products. Most of the litter washing up on the shores in cities originates from different sources on land, such as construction sites or people. The proportion of cigarette stubs in the litter on the shores is high. In cities, stormwater plays a significant role in marine litter and problems are caused by situations such as sewage overflows. Litter ends up in natural shores mainly from the sea, from sources such as maritime traffic and fishing.

Collecting litter from the sea is very difficult. Especially removing microplastics from the sea and the shores is virtually impossible. It is therefore important to prevent litter from ending up in the sea. Marine litter is a problem that is easy for anyone to help to reduce through their own actions. The new litter-related measures in the Programme of Measures of the Marine Strategy are specifically aimed at reducing marine litter by developing waste management services on leisure beaches, preventing microplastics from getting to the sea and enhancing the recycling and collection of certain types of waste.

Key actors

Ministry of the Environment, Ministry of Transport and Communications, ELY Centres, Finnish Environment Institute, Metsähallitus, Finnish Transport and Communications Agency, ports, industries producing and using a lot of plastic, municipalities, waste management actors, Keep the Archipelago Tidy Association, private individuals

Measures to reduce litter

We will develop waste management on the coast and beaches

- By improving the tidiness and functionality of regional waste collection points
- By reducing litter on beaches that are in recreational use by enhancing the communication of information about the harmful effects of littering and increasing the number of waste bins
- By surveying the number of abandoned and discarded boats in the coastal areas and enhancing their waste management and recycling.

We will reduce the entry of microlitter from land to the Baltic Sea

- By minimising the rubber crumb emissions from sports facilities and playgrounds, for example, by encouraging municipalities and sports clubs to introduce more environmentally friendly solutions and by drawing up instructions for best practices
- By examining ways to reduce microplastic emissions from vehicle tyres and road markings
- By promoting the implementation of different storm-water filtering techniques, establishing wetlands and encouraging municipalities and cities to draw up storm-water management plans. Nature-based methods can also be used to reduce the harmful effects of floods.

We will reduce the plastic loading from agriculture

- By communicating information about the degrading of plastics and how they are transported in the soil and waterways and by drawing up guidelines for agricultural actors.

We will reduce the littering caused by shipping and boating

- By instructing boaters in the recycling of waste generated in boating and by promoting waste management at marinas
- By enhancing the flow of information and control in large ports with regard to leaving waste in ports.



Picture: PSS ry

What can you do?



Reduce your consumption of plastic, pay attention to the amount of plastic when shopping. Reduce your use of disposable tableware when hiking by the sea.



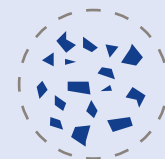
Make sure that your litter ends up in appropriate waste bins. Cigarette stubs are also litter and they are transported to water bodies by stormwater.



If you go boating, never throw litter into the water, always take it to the waste management services in the harbour.



If you go fishing or hunting, make sure that you do not leave fishing equipment or bullet shells in nature.



Microlitter gets transported to seas and inland waters from sources such as rubber crumb pitches and road traffic. Make sure you do not spread rubber crumbs yourself, especially if you are near a stormwater inlet or a water body.

ENVIRONMENTAL IMPACTS OF SHIPPING AND BOATING

All maritime transport causes damage to the marine environment. Vessels' propeller currents and waves increase the erosion of the seabed and the shoreline and disturb the seabed's biotic communities. In addition, maritime traffic causes continuous or shorter low-frequency propeller noise. Underwater noise has been found to have a harmful impact on marine mammals and fish, but not enough is yet known about its impacts on other aquatic organisms and diving birds. The solutions proposed in the Programme of Measures for the disturbance caused by increased boating and ship traffic include local speed limits and communication.

The toxic paints (antifouling products) used for preventing barnacles and other organisms from attaching to the bottom of vessels, release an active agent that is toxic to all organisms living in water. The Programme of Measures therefore pays attention to reducing the toxicity of the paints and their use. Each boater can reduce their toxin loading by choosing a non-toxic paint for the bottom of the boat and by mechanically cleaning the bottom a few times every summer. It would be important to collect the scrubbed material so that the paint or the non-indigenous species that came off do not end up in the waters. Emissions from the scrubber washwaters of merchant ships are also harmful and ef-

forts are made to actively exert influence in the International Maritime Organisation IMO to reduce them.

The increased ship traffic increases the risk of oil and chemical accidents. Oil pollution from shipwrecks also threatens the state of the sea. Preparations for these risks are made by preventing the risk in advance by means of legislation, supervision and instructions. Exercises are also organised to practice for possible accidents so that the impacts on the state of the sea can be minimised in the event of an accident. International cooperation is important in the anticipation and prevention of risks. An important aspect in the environmental impacts of shipping and boating is the spread of invasive non-indigenous species. They may spread to new areas with ships' ballast waters or attached to the hull of ships and boats.

The measures taken to reduce the nutrient emissions and litter from shipping and boating have been discussed in the chapters on eutrophication and litter.

Key actors

Ministry of Transport and Communications, Ministry of the Interior, Ministry of the Environment, Finnish Transport and Communications Agency, Finnish Safety and Chemicals Agency, Finnish Transport Infrastructure Agency, the Border Guard, Finnish Defence Forces, rescue services, maritime operators such as shipping companies, ports and port operators, Finnish Environment Institute, John Nurminen Foundation, Keep the Archipelago Tidy Association, ELY Centres, municipalities, private individuals

Measures to reduce the impact of shipping and boating

We will reduce the emissions of harmful substances from shipping and boating

- By reducing the entry of substances toxic to marine organisms to the sea, for example, by limiting the concentrations of active ingredients in toxic paints
- By promoting the construction of boat washing facilities
- By examining the possibilities to restrict the emissions of sulphur and other harmful substances caused by sulphur scrubbers at the international level.

We will reduce the disturbance caused by shipping and boating

- By communicating information about the impact of underwater noise, physical disturbance and the risk of spreading non-indigenous species caused by boating on the marine environment.
- By restricting boating and commercial shipping locally, especially in sensitive areas.

We will strengthen the preparedness for oil and chemical spill response and the response capacity

- By increasing awareness of the risks of new chemicals and oil types
- By renewing the response equipment
- By enhancing both the safety of vessels and the monitoring of emissions
- By improving cooperation and operating models between the different authorities both nationally and internationally in case of accidents
- By examining and assessing the state of shipwrecks and the possibilities to clean them.

What can you do?



Take the environment around you into account when boating at sea. Do not cause unnecessary disturbance such as noise, or damage to the seabed with an anchor or a propeller.



Follow the issued speed limits. The speed of the boat contributes to the amount of coastal erosion and noise.



Avoid the use of toxic paints. Use alternatives without toxins and wash the bottom of the boat to prevent barnacles and other organisms from attaching to it.



Make sure that the water you use for cleaning the hull does not return to the sea untreated. This way you can prevent the spread of harmful substances and non-indigenous species.



MARINE CONSTRUCTION AND DREDGING

Dredging of shipping lanes and harbours, construction at sea and in the vicinity of the shore as well as the laying of cables and pipes cause damage to the seabed habitats and destroy the natural seabed. Small-scale dredging carried out by private households also matters, especially if a lot of it is done in the same area and in areas with sensitive biotopes.

Dredging and construction on the shore and at sea also cause underwater noise, which is usually impulsive and becomes stronger rapidly. For example, very high sound pressure levels have been measured in connection with piling or excavation blasting during the construction phase of offshore wind farms. All the harmful effects of noise on organisms are not yet fully known,

but animals such as marine mammals and fish have been found to be moving away from noise. The production of unnecessary noise should therefore be reduced. The new measures in the programme of measures are aimed at reducing the harmful effects of dredging and marine construction, among other things, by increasing the planning of small-scale dredging and finding more environmentally friendly techniques and methods for reducing harmful effects.

Key actors

Finnish Transport Infrastructure Agency, Ministry of the Environment, Ministry of Transport and Communications, ELY Centres, Regional State Administrative Agencies, ports, wind power companies and other parties conducting construction at sea, dredging companies, private individuals



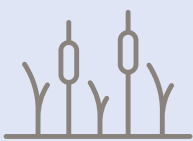
Measures to reduce the impacts of construction at sea

We will reduce the negative impacts of dredging and other construction work on the marine environment

- By increasing awareness of their impacts
- By improving the planning of dredging
- By examining the feasibility of more environmentally friendly dredging techniques and working methods
- By examining the possibilities to restrict the underwater noise caused by marine construction in different conditions.

Picture: Henna Rinne

What can you do?



Avoid unnecessary dredging. Small-scale cutting of the reed belts may often be sufficient.

Always notify dredging to the ELY Centre and find out the restrictions and obligations related to it.

If you are building near the shore, already take the impacts on coastal and marine nature into account in planning and at the construction stage. For example, do not remove all vegetation unnecessarily.



**Suomen
merenhoitosuunnitelman
toimenpideohjelma
vuosille 2022–2027**

Ympäristöministeriön julkaisu
2021:30



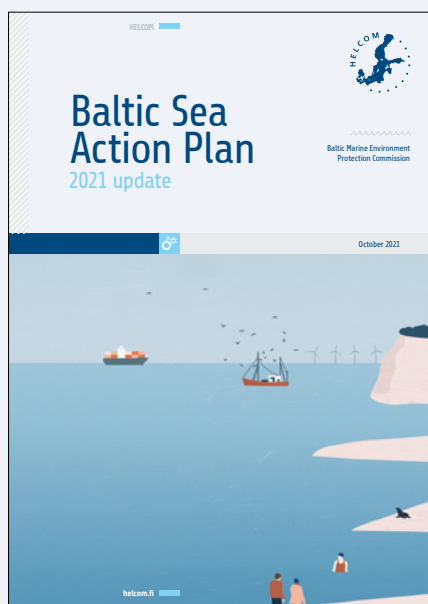
Ympäristöministeriö
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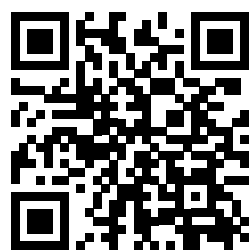
(abstract in English)



Water and marine
management plans
(in Finnish, ymparisto.fi)



HELCOM's Baltic Sea
Action Plan (helcom.fi)



Maritime Spatial Plan for
Finland 2030
(meriskenaariot.info)





Ympäristöministeriö
Miljöministeriet
Ministry of the Environment



Suomen ympäristökeskus
Finlands miljöcentral
Finnish Environment Institute



Ministry of Agriculture and Forestry of Finland



MINISTRY OF TRANSPORT
AND COMMUNICATIONS



Centre for Economic Development,
Transport and the Environment