

Unofficial translation of chapters 5 to 8 (pages 226-283) of the report of the Danish Fisheries Commission 2022-2023

Publication date: 2024

Disclaimer

This document is an unofficial translation of chapters 5 to 8 (pages 226-283) of the report of the Danish Fisheries Commission 2022-2023, published 20th December 2023.

This translation contains chapters 5 - Overall Vision for Danish Fisheries, 6 - Recommendations, 7 – Coastal Fishing Scheme, 8 – Trawl Free Zone in the Belt Sea.

The full report of the Danish Fisheries Commission 2022-2023 exists only in Danish. The report can be downloaded [from the website of the Ministry of Food, Agriculture and Fisheries of Denmark](#). The summary of the report (pages 9-21) was unofficially translated by Hegland, Troels Jacob and is [available online too](#).

The translation was covered by the [Baltic Sea Advisory Council](#) and done by [Docbase](#) Certified Translation Services with a subsequent quality-check and light editing by:

- Peder Andersen: Emeritus Professor in Resource Economics at the University of Copenhagen,
- Poul Degnbol: Former Head of Advice at the International Council for the Exploration of the Sea (ICES),
- Troels Jacob Hegland: Associate Professor in Fisheries Management at Aalborg University.

All 3 were members of the Fisheries Commission along with:

- Lars Barfoed: Chairman of the Fisheries Commission (resigned as chairman and member on September 26, 2023, due to his candidacy for the election to the European Parliament).
- Grete Elisabeth Dinesen: Senior Consultant in Ecosystem-Based Fisheries Management at the Technical University of Denmark.
- Peter Grønkjær: Professor in Marine Ecology at Aarhus University.
- Simon Jul: Food Entrepreneur.
- Niels Buus Kristensen: Senior Researcher at the Institute of Transport Economics, Oslo.
- Birthe Larsen: Associate Professor in Economics at Copenhagen Business School.
- Liselotte Hohwy Stokholm: CEO of the think tank "Ocean Institute" (Tænketanken Hav).



5.

OVERALL VISION FOR DANISH FISHERIES



In Chapter 4, the Fisheries Commission identified a number of challenges for Danish fisheries as a business and from a societal perspective. Common to the challenges is that a number of significant initiatives are needed to prepare commercial fisheries for new times where the economy, environment and climate form significant frameworks for the future of fisheries, or to avoid that challenges may intensify over time. In Chapter 6, the Fisheries Commission sets out a number of recommendations to meet the challenges. Based on the challenges, this chapter translates the Commission's objective of ensuring the greatest possible socio-economic benefit with the least possible impact on the ecosystem and climate into an overall vision for Danish fisheries. The vision should be seen as the overall benchmark for the specific recommendations.

In terms of the goal of maximizing the socio-economic benefits of fishing, it is the Fisheries Commission's vision that Danish fisheries as a whole should operate under normal market conditions and in this sense be on par with a number of other industries. This means that efforts must be made to ease the special restrictions on ownership, etc., specific to the fisheries sector, which can be barriers to further development towards an economically robust, resource-efficient and competitive industry. The regulation of fisheries must proceed in the direction of a framework regulation with greater degrees of freedom for the exercise of fishing, and on the other hand it is the industry's responsibility to document that this framework is complied with. Below there are a number of important frameworks within environment and climate which the fishing industry must incorporate to a greater extent as a natural part of their business activities.

Departure from the principle that the fishing industry must operate on market conditions must be justified by special considerations specific to the fishing industry. The Fisheries Commission believes that this development will work for the majority of Danish fisheries (hereinafter this part of the fishing industry is referred to as Group 1). Some companies are already ready to take on this freedom and responsibility, while other companies still need to develop in order to adhere to this solution.

There may be parts of the fishing industry that run an increased risk of disappearing if restrictions are eased, e.g. in terms of ownership and quota concentration but which it is desirable to continue maintaining as they contribute to achieving other societally prioritized goals such as contribution to local employment and culture supporting elements (hereinafter referred to as Group 2). Such considerations may to a certain extent justify supporting parts of the fishing industry. In practice, this will currently include the smaller vessels participating in a new coastal fishing scheme.

Based on the above considerations regarding the two main groups, the Commission has chosen not to draw up separate recommendations for the three fishing industry segments referred to in the terms of reference.

It is an integral part of the Fisheries Commission's vision for a robust, resource-efficient and competitive fishing industry that it is also exercised within the natural environmental framework. This implies that the industry contributes to the utilisation of the sea's natural resources at a level that ensures good future utilisation opportunities and robust ecosystems, and that a gradual transition to climate neutrality takes place, and that knowledge and technology that can contribute to reducing the environmental and climate impacts from fishing continuously and effectively, are brought into play.

The Fisheries Commission sees a conversion of fisheries management to truly ecosystem-based, as formulated in the EU's common fisheries policy, as a key part of a future sustainable utilisation of marine resources.

6. RECOMMENDATIONS



The Fisheries Commission's recommendations address the challenges identified in Chapter 4. The recommendations are in principle transversal across the focus areas. The Fisheries Commission's recommendations are based on the aforementioned focus areas and conclusions, and recommendations are made for each of the areas. The recommendations should be understood as a package of measures that can help to achieve the objectives referred to, including a number of recommendations which can help to improve the situation for Danish fisheries after Brexit. In order to achieve the maximum effect of the recommendations, some of the recommendations should be viewed in conjunction with others. The recommendations can have both positive and negative effects across the focus areas.

With regard to the timeframe for the Fisheries Commission's recommendations, the Fisheries Commission emphasizes that the effect of some of the recommendations will only take effect further in the future. This is because, for example, changes in EU policy take a long time.

A prerequisite for the Fisheries Commission's concrete recommendations to have full impact is that Denmark reaches a position where the obligations arising from a number of agreements and conventions, which Denmark has signed up to, are complied with. We are not yet in this position. Agreements and conventions include, among others, the UN Convention on the Law of the Sea, the UN Rio Declaration, the FAO Guidelines for Sustainable Fisheries and the Application of the Precautionary Principle, the UN Convention on Biological Diversity, the statements of the World Summit on Sustainable Development in Johannesburg in 2002 and the UN Sustainable Development Goals of 2015. To this is added what follows from the EU's common fisheries policy and central EU directives, including the Marine Strategy Directive, the Habitat Directive, the Water Directive and the Bird Protection Directive. To this is added the EU Biodiversity Strategy for 2030.

In its recommendations regarding grants, the Commission has emphasized that these must, as far as possible, contribute to supporting the development of new knowledge, and in cases where grants are recommended to specific companies, that these can effectively contribute to supporting the achievement of specific environmental and climate goals.

The Fisheries Commission's recommendations regarding the Coastal Fishing Scheme and trawl-free zone in the Belt Sea are stated in chapters 7 and 8.



6.1 Institutional recommendations

Based on Chapter 4 regarding the challenges and opportunities of fisheries, the Fisheries Commission has concluded that a number of challenges cut across the focus areas. In this context, the Fisheries Commission has two recommendations that are intended to meet these challenges. The recommendations are of an institutional nature, they extend widely across the focus areas, and in some respects are a prerequisite for other of the recommendations to be fully realized. The recommendations relate to the fact that there are challenges in Danish fisheries, which can only be remedied by fundamental changes in the EU's common fisheries policy.

In addition, the interests in relation to the sea cross a number of areas of responsibility, which to some extent may be unsuitable in relation to the objective of implementing real ecosystem-based management, which is why coordination across interests and areas of responsibility is important.

Recommendation 1:

Comprehensive reform of the EU's common fisheries policy and other EU rules

A number of the Fisheries Commission's recommendations require fundamental changes in the EU's common fisheries policy and other EU rules that are important for fisheries. This concerns rules regarding which gear may be used, mesh measurements, requirements for the size of the fish landed, prohibition areas, environmental considerations, control regime, the possibility of coexistence with other actors at sea, etc. Reforms of central EU policies take place relatively rarely, extending over a long period of time. It requires a long preparation for the Member States involved if there is to be an impact on the final outcome of the negotiations. It is therefore crucial that Denmark allocates the necessary resources to prepare for a future reform.

While Denmark is working on more fundamental changes within the existing common fisheries policy, Denmark must therefore work to ensure that

- as far as possible, proper ecosystem-based management is implemented and
- to simplify and shorten the procedures that are important for technical regulations, such as gear selection.

A forthcoming reform must provide the opportunity to organize a fishing industry with much greater degrees of freedom than today to ensure the optimal economic and environmental benefits of fisheries, as well as fisheries management that is truly ecosystem-based.



THE FISHERIES COMMISSION RECOMMENDS:

1a Preparation of Danish input for a reform of the EU's common fisheries policy

It is recommended that an inter-ministerial working group be set up, supplemented by experts, with a view to drawing up a negotiating proposal with concrete proposals for a profound revision of the common fisheries policy and other EU rules of importance for fisheries. Further regionalization of the common fisheries policy must be worked on, so that the competence for management corresponds to the individual ecoregion. The proposal must include a proposal for a regulation that, to a much greater extent than today, is based on a framework regulation with extensive degrees of freedom for the exercise of fishing, and where it is up to the profession itself to document that this framework is complied with. Specifically, the following elements may be included in the presentation:

- Proposal regarding a real ecosystem-based fisheries management. The quota system and other regulations must be developed into an ecosystem-based multi-species approach. It is important to continue to maintain a quota system, which is also a prerequisite for ecosystem-based management, but the quota system must be developed and changed so that it is based on an ecosystem-based and multi-species approach, including all the predators on fish.
- A fisheries management where objectives are set for the fishery, including, for example, maximum by-catch, maximum outtake and maximum impact on the ecosystem, and fulfilment of criteria for documentation that the objectives have been met. This can lead to greater degrees of freedom for the industry through increased self-management, cf. Recommendation 4.
- In order to create the basis for ensuring the greatest possible socio-economic benefits from fisheries, the future common fisheries policy should, within the framework of an ecosystem-based approach, also be based on management based on the principle of maximum economic yield (the MEY principle as explained in section 4.2).
- Proposal regarding requirements for real-time monitoring of fish stocks so that fishing efforts can be targeted at areas and times with the most optimal catch composition, thereby optimizing the economic yield and minimizing the impact on nature, the marine environment and climate.
- At the EU level, work must also be done on faster approval processes for changed and new gear types that have been developed in order to increase the overall environmental friendliness of the gear. As a result, Danish fisheries authorities can more quickly grant permission to implement the use of the gear in Danish and foreign waters. In the EU, efforts must also be made to ensure that these requirements and environmental considerations are implemented across EU member states.

Recommendation 2: Establishment of a Marine Council

There is a need for an independent council that advises holistically on marine resources and ecosystems across the many different interests and the natural climate and environmental conditions. The Council must ensure a holistic view across ministerial areas of responsibility. Denmark is subject to a number of EU directives, three of which (the EU's common fisheries policy, the Maritime Spatial Planning Directive, and the Marine Strategy Directive) require Denmark to achieve ecosystem-based management of the utilisation of marine resources, as well as achieving specific environmental goals for the maintenance and protection of structures and functions of the marine ecosystem. It is currently unclear whether Denmark will be able to meet these obligations.

The interests in relation to the sea cut across a number of areas of responsibility which may be unsuitable in terms of implementing real ecosystem-based management. The sea does not have a dedicated minister, but an ecosystem-based management of the sea nevertheless requires a number of ministries to coordinate their efforts between their respective resorts. The Danish marine environment is under pressure on several fronts. This is due, among other things, to pressure factors such as nutrient discharge from agriculture, discharge of environmentally hazardous substances and the effects of fishing on fished stocks, unwanted bycatches and physical disturbance of the seabed. To this is added a number of other activities such as shipping, the establishment of offshore wind and raw material extraction, etc. Securing and supporting robust ecosystems in the sea is, like climate action, a multidisciplinary task that will extend over several generations. The tasks require a transversal approach to find solutions in relation to resource management as the marine environment and climate change and the level of activity (e.g. sea wind) on the sea increases.

Fisheries are particularly challenged by the situation, on the one hand, because fisheries depends on healthy ecosystems, and on the other hand, because fisheries can conflict with other activities that take up space at sea, unless there is active work to find effective models for coexistence.

It is the Fisheries Commission's assessment that there is a need for a coordinating effort in the form of a Research-based Danish Marine Council, which must play a crucial role in the work of managing and promoting sustainable use of marine resources that ensures economic efficiency and ecological resilience and coexistence.

The recommendation is relevant for the entire fisheries sector.



THE FISHERIES COMMISSION RECOMMENDS:

2a Establishment of a Marine Council

The Fisheries Commission recommends the establishment of an independent Danish Marine Council consisting of experts who advise the government on marine resources and ecosystems across the many different interests. The Marine Council must, among other things, advise on how Denmark ensures an ecosystem-based management of the sea's resources, which means that the sea's ecosystems are maintained and strengthened in interaction with the goal of achieving economic and social benefits for Danish society and internationally.

The experts in the Danish Marine Council must be research-based in projects and initiatives that support the development of sustainable management of the sea and the common marine resources and ensure the protection of biodiversity and ecosystems.

The Danish Marine Council must annually, from a holistic perspective, assess whether the efforts of the government and the Danish Parliament in relation to the marine environment demonstrate that Denmark will be able to live up to the EU policies and directives to which the country has committed itself within the set deadlines. Furthermore, the Marine Council must contribute to the public debate and prepare analyses and recommendations for strengthening the marine environment and the use of marine resources through the development of an ecosystem-based management approach.

In connection with the Danish Marine Council, a stakeholder monitoring group should also be set up to advise the Danish Marine Council.

6.2 Recommendations on maximum socio-economic benefits

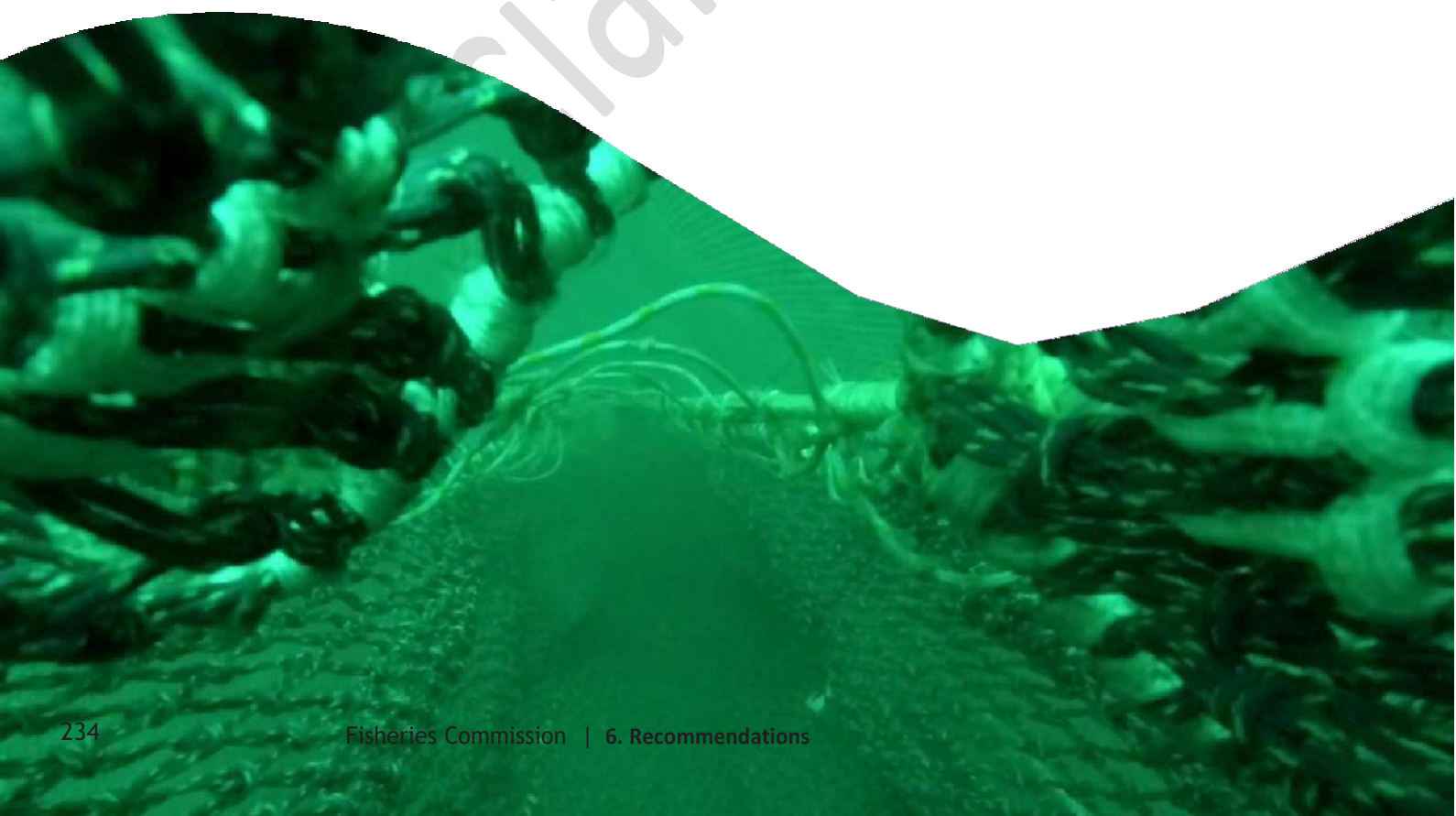
These recommendations must be seen as a coherent package of measures that can contribute to achieving the objective of an economically robust fishing industry that can operate under normal market conditions while taking into account the environmental requirements placed on the industry. This means that the industry must be freed from unnecessary regulatory constraints that prevent a maximization of resource rent, but at the same time that the fishing industry is on par with other industries, when it e.g. applies to sector-specific services that are currently paid for by society.

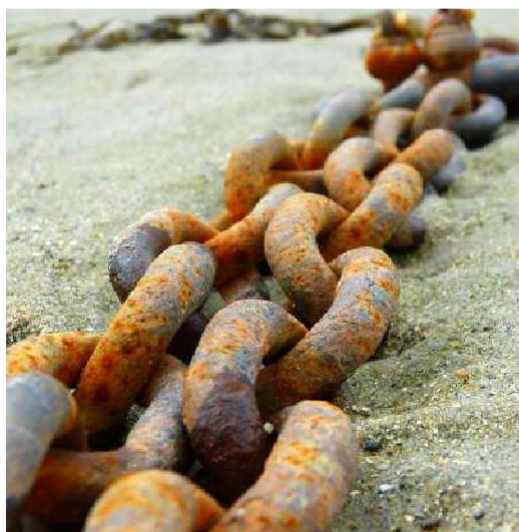
Recommendation 3: Simplification of fishing ownership rules

The current regulation contains a number of restrictions that are not present in other industries or in other countries, and which constitute an obstacle to the realization of the sector's full economic potential. The B-quota system is a barrier to generational changes and makes it difficult to obtain partial seller financing, which is known, among other things, from the purchase and sale of agricultural properties. Quota concentration rules and requirements for A-status for ownership of fishing quotas may hinder the organisation of more efficient fisheries sector with fewer vessels and hamper generational changes and new forms of ownership and financing.

The fishing industry must be able to utilise technological advances and economies of scale better, as well as create a better framework for financing and generational change in order to ensure an economically robust fishing industry in the future. Especially in relation to new climate and environmental requirements and the resulting need for new investments, there is a need to create good framework conditions in order to operate an economically profitable and sustainable fishery (see also box 3.2.1).

The recommendations are relevant to the majority of the fishing industry (Group 1).





THE FISHERIES COMMISSION RECOMMENDS:

3a Dismantling the B-quota system

The Fisheries Commission recommends that the B-quota system be phased out, as it constitutes a significant barrier to generational change and financing, including more flexible financing opportunities. A phasing out of the B-quota system will also mean a significant administrative relief for the fishermen concerned.

3b Relaxation of the rules regarding A-status

The Fisheries Commission recommends that the current rules on A-status be relaxed, so that work in fisheries enterprises on land is on par with work on a fishing vessel. This will facilitate generational changes, as a modern fisheries company requires new and different competencies and functions than those that have historically been associated with fisheries.

3c Revision of the general quota concentration rules

The Fisheries Commission recommends that the existing cross-rule be relaxed so that it will be possible to own a limited amount of FKA-quota, even if you own 1 percent of the total ITQ quotas [the Danish legal term is "FKA", which means vessel quota shares]. This will provide greater flexibility for ownership across the segments, and there may be a need for a smaller FKA quota in the pelagic fishery to cover bycatches. In order to ensure a better possibility of utilising technological advances and economies of scale, the Fisheries Commission recommends that the possibilities for the general quota concentration rules to be relaxed within the existing rules of the Competition Act be examined.



Recommendation 4: Increased self-management in Danish fisheries

The Fisheries Commission considers that the regulation must be organized in such a way that it gives the industry greater degrees of freedom to establish a fishery that can generate the greatest possible resource rent, with the least possible environmental and climate impact. In the daily management, the fishing industry is subject to a large number of application and approval processes in the authorities' quota administration, which can be time-consuming, and which can have an impact on the organization of the fishery. A number of these functions can, in all probability, be carried out by the industry itself or a third party, as has been the case with the administration of rent/lease of quota shares, which was previously an official task. It is also an independent challenge that the existing EU fisheries policy with its extensive detailed regulation is a barrier to the development of a fishery with much greater degrees of freedom in the choice of gear and fishing method.

An increased degree of self-management will give the fishing industry greater self-determination and flexibility in the daily management of the fishery, while complying with all relevant legal requirements. In addition, a change in the EU's common fisheries policy towards greater freedom of choice with regard to gear will allow fishermen to better organise a fishery with a minimum of unwanted bycatches.

The recommendation is aimed at the majority of the Danish fishing industry (Group 1) and should be seen in the context of recommendation 1.

THE FISHERIES COMMISSION RECOMMENDS:

4a Analysis of which tasks, currently done by the public authorities, can be performed by the industry or a third party

The Fisheries Commission recommends that it be further analysed which specific tasks that are currently managed by the authorities can be carried out by the industry, without this impairing the authorities' ability to maintain effective control efforts. This could for example be the movement of annual quantities/shares, the administration of year-to-year flex, international quota swapping.

It is the Fisheries Commission's starting point that as many tasks as possible should be transferred to the industry, while taking into account the above need for regulatory control.

4b Comprehensive change to the EU's common fisheries policy for more self-management

The Fisheries Commission also recommends that the EU's common fisheries policy be amended so that, instead of containing detailed rules for which gear may be used in certain waters, it is based on which objectives the fishery must meet, including, for example, rules on maximum bycatch, maximum outtake and ceiling for maximum impact on the ecosystem, as well as criteria for how the industry itself must document that the objectives have been met (see also recommendation 1).



Recommendation 5:

User payment for biological advice and control of fisheries

Other industries largely pay the public expenses to secure the future of the industry and control of the industry's compliance with the rules as discussed in section 4.1.5. A similar arrangement is therefore proposed for fisheries regarding on the one hand public expenditure to ensure a future resource base for the industry and, on the other hand public fisheries control.

THE FISHERIES COMMISSION RECOMMENDS:

5a User payment for biological advice and control of fisheries

The Fisheries Commission recommends the introduction of user fees for:

- part of the research institutions' work, which aims to secure the industry's future resource base, and which is currently delivered through contract services
- part of the international research collaboration, which aims to secure the industry's future resource base, such as parts of the Danish contribution to ICES
- industry's regulatory compliance through the fisheries control.



Recommendation 6:

Clarity on the distribution of the resource rent in Danish fisheries and possible payment for the right to use the common fisheries resource

The introduction of transferable quotas has led to a significant adjustment of the fishing capacity and renewal of the fishing fleet in Danish fisheries, as well as a significant increase in earnings, which is partly part of the *resource rent*. This is especially true for the pelagic segment. Meanwhile, society as the owner of the shared fisheries resource continues to receive no direct payment from the fishing industry for the right to use it, as is known from other industries that are based on the usage of shared natural resources, e.g. oil, gas, and offshore wind. Also, expenses for services to the fishery such as fisheries control and biological advice are borne by the community (the state), cf. recommendation 5. Finally, there has not been appreciable public discussion or explicit decision-making on how society approaches the question of how the value created by the utilisation of the shared fisheries resource should be distributed.

Creating clarity about the distribution of the resource rent in Danish fisheries will ensure that the public has a greater knowledge of what values are created by the fishing industry having access to fish on a common fishery resource, and that clarity is ensured about how these values are distributed.

The recommendation is particularly relevant for the part of the fishery that has experienced a significant increase in profitability (parts of Group 1) as a result of the introduction of transferable quotas and in society at large. The recommendation should be seen in conjunction with recommendations 3-5.

THE FISHERIES COMMISSION RECOMMENDS:

6a Disclosure of the size and clarity about the distribution of the resource rent in Danish fisheries

The Fisheries Commission recommends that economic assessments are made for the resource rent on an ongoing basis in order to obtain a transparent picture of the profitability of different parts of Danish fisheries, including the possibilities of increasing the resource rent under different regulatory scenarios, and that these analyses are made publicly available.

How the resource rent is distributed is a societal issue, and therefore the Fisheries Commission recommends greater transparency on the distribution of the resource rent between the fishing industry and society as a whole. This can be done, for example, by including the above analyses in relevant political negotiations on the framework for the fishing industry.

6b Allocation of quota rights and possible payment for the right to use the fish resource

It is recommended that an explicit political position be taken on the question of introducing a payment for the right to use the fish resource. In order to avoid legal complications such payment for the right of usage requires the termination of existing agreements regarding the allocation of quota rights, i.e. termination with 16 years' notice. A position should only be taken after a further analysis.





Recommendation 7:

Strengthening the state-controlled “Gentle to Nature”-label [in Danish “Naturskånsom”]

The “Gentle to Nature”-label remains relatively unknown among consumers and is small in volume, as only a few vessels are enrolled in the scheme. Fish which are labelled from the scheme cannot be included in canteens' food stamp calculations either, as only fish labelled with the official Danish ecology label from aquaculture can be included.

Experience from other labelling schemes shows that added value can be achieved through labelling schemes. Certification of several Danish fisheries can therefore both serve to meet the requirements of the European retail chains and be an instrument for increasing value added in the Danish fisheries, aquaculture and fishing industry sector.

THE FISHERIES COMMISSION RECOMMENDS:

7a Expansion with more fisheries and, in the long term, more criteria for the state-controlled “Gentle to Nature”-label

In order to expand the scheme, and thereby the opportunity to increase consumer knowledge and the opportunity to create added value from the fish, the Fisheries Commission recommends that the state-controlled “Gentle to Nature”-label be extended to include species for human consumption caught with gentle gear in fully documented fisheries, including for vessels over 17 meters and traveling over 48 hours. The Fisheries Commission recommends that new campaigns be run to promote the label as volume increases. It is also recommended that the criteria for obtaining the label are continuously adapted and in the long term also include animal welfare aspects and requirements regarding minimization of bycatch of birds and marine mammals. There must be ongoing work to get more species into the scheme.

7b Expansion of the organic food label [A Danish label used for restaurants and canteens to communicate the percentage of organic food] with “Gentle to Nature”-labelled fish

The Fisheries Commission also recommends an extension of the organic food label [A Danish label used for restaurants and canteens to communicate the percentage of organic food] to include “Gentle to Nature”- caught fish, so that these can count in line with goods labelled with the official Danish ecology label.



**Recommendation 8:
Strengthening the domestic market and a stronger profiling of Danish fish**

The Fisheries Commission estimates that in these years with an increasing focus on climate change, there is a special situation where Danes seem more willing than before to change their food habits. This will therefore make sense especially during these years, with efforts that mentally put fish on the map when new eating habits are chosen. Given that it is in a considerable degree younger, climate-conscious consumers who change their eating habits, it may especially be fish products with a documented low climate impact or another environmentally friendly profile that are the ones which are most opportune to promote (see also recommendation 7 on strengthening the “Gentle to Nature”-label).

The recommendations are relevant for the entire fishing industry and the processing industry.

THE FISHERIES COMMISSION RECOMMENDS:

8a Consumer-driven promotion of sustainable seafood

In order to promote consumer-driven sustainability and the Danes' fish consumption, efforts should be made to increase the availability and visibility of high-quality fish with a climate and environmentally friendly profile. The focus should be on species deemed to have significant unrealised catch potential (e.g. squid), high potential for increased price (e.g. flounder), or which have a low climate impact (e.g. blue mussel).

In parallel, work should continue to improve the quality, e.g. through quick icing, gentler handling or other measures that increase quality to ensure a higher price. It probably also makes sense to focus on 'fish in season', which can both contribute to better quality and lower climate emissions, as the fish can be caught with less effort.

The Fisheries Commission also considers that for a number of species (e.g. squid and industrial species) there may be a need to support product development targeted at the Danish market.

Finally, the Fisheries Commission recommends that Danish fisheries work purposefully to be able to position themselves as a fishing industry practicing in accordance with animal ethic principles as closely as possible, which can become a position of strength on the export market.



6.3 Recommendations for local communities and development

These recommendations must be seen as a coherent package of measures that aim partly to change some of the regulatory frameworks that can be a barrier to operating and developing sustainable fisheries on a smaller scale, and partly to reduce some of the pressure factors which are a real challenge for this type of fisheries. A separate recommendation is added to this in Chapter 7 on Coastal Fishing Scheme. This all serves to promote opportunities for economic activity and employment in local areas dependent on coastal fisheries.

Recommendation 9: Fisheries as a driving force for activity in fisheries-dependent local areas

The number of smaller fishing vessels has been declining sharply for a number of years, which, in combination with a concentration of landings in the larger ports and a decline in important fish stocks, has contributed to an overall decrease in activity and employment in a number of fisheries-dependent coastal communities. Concentration trends towards the largest fishing ports have contributed to the fact that activity in several of the smaller fishing ports has fallen to a level where it may be difficult for the remaining fishermen to collect fish or support a necessary, ongoing update of critical infrastructure. Additionally, earnings in coastal fisheries are typically at a low level, which is why it is not unusual for coastal fishermen to need to supplement their income with other employment. However, existing rules regarding the maintenance of A-status may be a barrier to this.





The presence of active fisheries along the Danish coasts is crucial for the ability to support certain lifestyles, activate a cultural heritage related to coastal fisheries, make year-round settlement attractive, and generally support activity and employment, including in particular in companies directly related to the fishing industry as well as tourism in the areas in question in a large number of larger and smaller coastal communities along the Danish coasts.

As a background, for assessing how best to support the challenged local communities, there is also a need for systematic collection of data that can shed light on the importance of fisheries for coastal communities, including in terms of tourism, quality of life and housing, and make it possible to genuinely assess the socio-economic contribution of fisheries to the development of the coastal communities associated with fishing ports.

The recommendation is particularly relevant for coastal fisheries and smaller fisheries-related businesses and must be seen in the context of the other recommendations for simpler fisheries regulations in Recommendation 3 and Recommendation 7 on the “Gentle to Nature”-label.

THE FISHERIES COMMISSION RECOMMENDS:

9a Removal of 60 percent-requirement for fishermen with vessels with limited turnover

The Fisheries Commission recommends that it be made simpler to be a part-time fisherman by - for vessels with limited turnover - easing the requirement that 60 percent of the fisherman's income must come from fisheries in order to maintain A-status. This will make it easier to supplement fishing activity with other side-employment. There should continue to be a percentage requirement for earnings so that quotas are maintained with active fishermen. The exact level of this percentage requirement must be determined in cooperation with the industry and relevant knowledge institutions. The same applies to the turnover limit.



9b Combining fisheries with other industries

The Fisheries Commission recommends that legislative obstacles and bureaucratic barriers (in addition to the 60 percent-requirement, see above) to engage in part-time employment, where the fisherman can utilize his skills, is investigated. This can be in the form of small-scale seaweed cultivation and mussel breeding for example, as well as combining commercial fisheries with tourism-oriented use of the vessel, or working with marine nature restoration activities. As an extension of this, it is recommended to initiate a process with the aim of removing any obstacles and barriers to this as far as possible.

9c Support for the development and updating of infrastructure in small fishing ports and coastal communities

A crucial factor in ensuring and maintaining local activity is that there are the necessary facilities in the ports that can support easy storage and redistribution of the fish in order to make best use of short value chains. It is therefore recommended that separate grant funds are allocated to the targeted development/updating of infrastructure in strategically selected smaller ports (e.g. cold store, ice machine, smoking facilities and the like).

9d Earmarked additional quantities or landing obligation allowances in smaller ports

The Fisheries Commission recommends that additional quantities or 'earmarked' quotas be offered with a local landing obligation, i.e. with a clause that these quotas can only be fished if they are landed in defined smaller ports. The purpose is to ensure landings in smaller ports. Smaller ports can, for example, be defined on the basis of annual turnover or landed quantities, thereby excluding what is understood to be the large ports. In order to have the greatest possible impact on the smaller ports, one can focus the scheme on the vessels that in practice are connected to the smaller ports by supplementing with a criterion that the vessel must land the majority, e.g. 60 percent or 80 percent of its total annual catch in the smaller ports to get a share in the extra annual quantities. The extra quantities are provided by government purchase (after an assessment of how much political support is to be offered to the local communities in question). In the quota share version, these are resold with an earmarked landing obligation requirement.

9e Collection of socio-cultural data on the interaction between fishermen and fisheries-dependent coastal communities

The Fisheries Commission recommends the development of a model for and subsequent initiation of an ongoing collection of data related to socio-cultural contexts and development trends in fisheries-dependent coastal communities. The development work should be coordinated with STECF's work on 'Fisheries Community Profiles', which currently takes place in a working group (Expert Working Group) on community data.



Recommendation 10: Handling seals and cormorants

Seals and cormorants are a natural part of the ecosystem, and their management must be seen in an international context, as they are transborder populations.

In those areas where cormorants and/or seals contribute to the marine environment remaining locked into an ecological balance, where coastal fish cannot re-establish themselves, even if significant pressure factors are reduced, better opportunities should be created for direct regulation of cormorant and seal populations, provided that this is done within a sustainable framework for these species' populations. The Fisheries Commission recommends that in the longer term, through the EU, the regulatory framework be created so that top predators such as seals and cormorants can be managed based on an ecosystem-based approach. The Fisheries Commission recommends that in the short term, Denmark initiate changes in EU legislation aimed at reducing the number of cormorants and seals in coastal areas. These measures should, with due regard to the populations of seals/cormorants, allow for more general and targeted regulation in areas where cormorants and seals are considered to pose a challenge to the fisheries and/or ecosystem.

An ecosystem-based management, where more knowledge and experience are gathered and further measures are taken aimed at protecting fisheries with stationary gear, will help to reduce conflicts between cormorants and seals and fisheries.

The recommendation is particularly relevant for coastal fisheries with stationary gear but may also have an effect on other fisheries beyond coastal waters, as the harvest of juvenile fish may have significance for recruitment to the adult stock.

THE FISHERIES COMMISSION RECOMMENDS:

10a Regulation of - and more knowledge about - cormorants and seals

The Fisheries Commission recommends that the opportunities offered by current legislation, such as the possibility of granting permission for the regulation of cormorants locally, where there is documentation that cormorants damage the fishery or vulnerable fish stocks, be utilised as far as possible. This includes that it is recommended that within the relevant resource ministries, experience be exchanged with other countries around the Baltic Sea, e.g. Sweden, to gain clarity on how they handle cormorants and seals within the regulatory framework, as well as around experiences with the effect of local regulation. It should be investigated whether there can be agreement on the Baltic Sea on an overall regulation of the stocks. It should also be investigated whether the public sector can play a role to a greater extent than before in organizing and enabling the regulation of cormorants and seals, which today are primarily regulated by privately organized hunters.

The Fisheries Commission also recommends that within a short number of years, and in parallel with other efforts, more knowledge be collected about the population structures and movement patterns of seals and cormorants, as well as area and seasonal variations in food choices. The Fisheries Commission also recommends that studies be carried out on the effect of limiting the distribution and size of selected cormorant colonies.

Furthermore, the Fisheries Commission proposes that the economic impact of seals through interaction with net fisheries be investigated.

10b Develop seal and cormorant-proof gear

The Fisheries Commission recommends that work be continued on gear optimisation of seal-proof gear and that the possibility of developing cormorant-proof gear be investigated





6.4 Recommendations for better marine environment, nature and fisheries regulation

The recommendations regarding the marine environment and nature protection support the objective of minimizing the impact on the marine environment and climate through ensuring robust ecosystems and biodiversity as well as ensuring sustainable harvested stocks.

The recommendations must contribute to 1) reducing the negative impact of fisheries on the marine environment and the resource base, 2) ensuring space for fisheries in the areas where it can take place with limited negative impact on the marine environment and high economic yield, 3) supporting coexistence between different activities at sea, 4) reducing external pressures on the marine environment and 5) ensuring innovation that promotes fisheries profitability and selectivity and reduces fisheries' impact on the marine environment. Overall, these recommendations will contribute to the development of a real ecosystem-based management of fisheries.

In order for the recommendations to have the best possible effect, it is a prerequisite that agricultural emissions are reduced sufficiently.

Recommendation 11: Implementing an ecosystem-based fisheries management approach

The management of fisheries is part of the overall management of the marine environment and the structures and functions of the ecosystems. The Fisheries Commission considers that real ecosystem-based fisheries management, as defined in the EU's common fisheries policy, has not yet been implemented. Therefore, efforts must be made in the long term to develop a real ecosystem-based fisheries management to ensure economically and ecologically sustainable utilisation of future fisheries resources.

An important step in this direction is the implementation of fully documented fisheries, which can target and optimize the fishery's sustainable utilisation of commercial species. At the same time, this will make it possible to develop real-time-based fisheries management with fewer regulations than today, so that fishermen alone must be responsible for ensuring that the framework conditions for fishing are complied with, but have freedom in relation to for example the choice of fishing methods, cf. recommendation 4.

The fisheries management of harvested stocks is today mainly individual stock regulation and does not in itself include a system-based approach. Quotas are today and should continue to be an important part of ecosystem-based management and are generally an important management tool in relation to rebuilding and preserving stocks. However, a prerequisite for the development of real ecosystem-based fisheries management is, among other things, the use of multispecies models for stock assessment and quota setting.

Mapping the seabed will help ensure that areas for fisheries are laid out on the basis of optimal knowledge, so as to ensure effective use of the fish resource while taking into account the protection of seabed habitats, essential habitats and biodiversity.

The recommendations below are considered to be important steps in relation to developing fisheries management that is truly ecosystem-based and integrated with other administrations of marine ecosystems, including international agreements on the marine environment and in national legislation related to the management of the Marine Strategy Directive and other nature policies, as well as the management of the Maritime Spatial Planning Directive and the development of the Danish Marine Plan.

The recommendations are relevant for all vessels engaged in commercial fishing, as well as recreational and leisure fishing.

THE FISHERIES COMMISSION RECOMMENDS:

11a Implementation of fully documented fisheries

When implementing fully documented fisheries, the Fisheries Commission understands the electronic monitoring of catches in real time on the vessels, as well as accurate GPS recording of fishing vessel or gear positions during fishing.

By implementing fully documented fisheries, information on catches is collected with high temporal and spatial precision, which can be used to target and optimize the fishery's sustainable utilisation of commercial species, and minimize negative effects on ecosystems, including minimizing unwanted bycatch of fish, birds and marine mammals, and undesirable impact on seabed habitats and organisms. In the longer term, the development and use of artificial intelligence, robotics, etc., can help to target fishing efforts to areas and times with the most optimal catch composition, thereby optimizing the economic yield, while minimizing the impact of fisheries on the marine environment

The Fisheries Commission recommends that fully documented fishing as a starting point covers all vessels engaged in commercial fishing. In the short term, this needs to be implemented for larger





vessels, and in the longer term, efforts must be made to ensure that it includes the entire Danish fishing fleet, as well as being implemented in the EU and internationally.

In some marine areas, recreational and leisure fishing is of significant importance for the mortality of fish populations. In the light of increased efforts to obtain comprehensive knowledge of the fisheries, the Fisheries Commission considers that better documentation must also be obtained for recreational and leisure fishing, and that it must be ensured through studies that there is a sufficiently good overview of the impact on fish stocks and the marine environment from recreational and leisure fishing.

11b Multispecies-based management

The development of ecosystem-based fisheries management requires a transition from a single-species-based to a multispecies-based MSY and MEY management practice. The multispecies-based fisheries management includes analysis of bycatch of unwanted species (e.g. juvenile fish, food fish and vulnerable species), natural interactions between populations in the food web, mortality, recruitment, growth and biodiversity, as well as links to man-made impacts. It is also recommended that the development of analytical methods that can support ecosystem-based fisheries management be strengthened. Denmark must work towards this implementation in fisheries management, nationally and in the EU and internationally.

To avoid possible overfishing, the Fisheries Commission recommends that a review be carried out for stock assessment of nationally regulated fisheries where there is a risk of overexploitation. The Fisheries Commission recommends that the principles for the regulation of international stocks (stock assessment and quotas) be transferred to the regulation of nationally managed stocks.

11c Mapping of seabed habitats and utilisation of marine areas by populations

The Fisheries Commission recommends that a mapping of the Danish seabed and associated habitats and biodiversity, including essential fish habitats, be initiated. The purpose is to map the robustness of the habitats to fishing and thereby prevent harmful effects on sensitive habitats. The Fisheries Commission recommends that areas with the highest catch efficiency may be reserved for fisheries. This will support an ecosystem-based management that takes into account the development of the ecosystem in relation to species and hectares. At the same time, the mapping can help to support the marine strategy's goal of staying within the limit values for loss and disruption from offshore wind, clapping [disposal of seabed materials elsewhere on the seabed], raw material extraction and coastal protection.

Data from a fully documented fishery (recommendation 11a) will be crucial to the mapping of the spread of especially mobile species' use of sea areas and seabed habitats.



**Recommendation 12:
Area-related fisheries regulation**

The impact of fisheries on the marine environment is linked to the types of gear used, as well as the habitat types and times they are used. The direct impact of fisheries relates to the target species, desired and unwanted bycatch and physical disturbance of the seabed.

In the case of area-related fisheries management, fishing can be carried out in the areas where fishing has the highest catch efficiency in relation to its environment and climate impacts, while protecting vulnerable habitats, spawning grounds and nursery areas.

The Danish Marine Plan does not set aside areas for fisheries, which means that fishing can take place where fishing is not subject to other activities' area-specific restrictions. Furthermore, no areas have been designated for the targeted restoration and conservation of commercially exploited fish stocks and their food fish, including the protection of essential habitat areas for fish. According to the agreement on the Marine Plan, the Marine Plan must as far as possible support coexistence between different activities at sea. It is important that fisheries are included and considered as a significant stakeholder in terms of marine spatial planning.

There is increasing competition for sea areas, especially in relation to the development of wind energy, and this development is expected to continue. It is therefore crucial that the focus is on creating coexistence between the various activities, so that the overall area and marine environmental impact is not increased, and that fisheries are not displaced to new and potentially marginal areas with an increased environmental impact and climate burden as a result.

The recommendation is relevant for all fisheries.

THE FISHERIES COMMISSION RECOMMENDS:

12a Environmentally friendly gear technologies

The Fisheries Commission recommends that specific requirements be introduced for Danish fisheries, ensuring that it is based on environmentally friendly fishing methods and gear applications in the future. The assessment of environmental friendliness must include effects on fishing efficiency to ensure that the total environmental impact associated with fishing is reduced.

To this effect the Fisheries Commission recommends:

- that in fisheries with passive gear, requirements are introduced for the use of technologies that reduce bycatch of marine mammals and birds in the areas where fishing poses a threat to these. In addition, for passive gear, there must be a focus on technologies that prevent gear from being lost and thus cause ghost fishing and marine pollution.
- that area-specific requirements are introduced for mobile fishing gear with bottom impact in order to reduce the bottom impact. In order to counteract area-specific by-catches of unwanted species, food fish and juvenile fish below minimum sizes, the Fisheries Commission recommends the introduction of gear designs and technologies that increase selection.
- that pelagic fisheries require the use of technologies that ensure targeted fishing and reduce the capture of unwanted species, food fish and juveniles, for example by further development and implementation of sonar technologies and artificial intelligence (AI).

The Fisheries Commission recommends continued development of mobile fishing gear with bottom impact. By this, the commission understands the adaptation and modification of the design of bottom trawls, boom trawls, scrapers and Danish seines. This includes the development of gear that reduces the capture of unwanted species and sizes, reduces unnecessary bottom impact, as well as better and more efficient fuel utilisation. Beyond this, the Fisheries Commission recommends further development of stationary gear. This includes pingers (acoustic alarms), geo-positioning against ghost fishing and biodegradable thread for nets, etc.

In order to take full advantage of the above recommendations, it is required that the recommendations regarding faster approval of new and environmentally friendly gear in the EU (recommendation 1) and recommendations regarding innovation of fishing gear and cooperation across the sector (recommendation 14) are implemented.

To take full advantage of the above recommendations, they must apply throughout the EU.



12b Coexistence of fisheries and other activities

The Fisheries Commission generally recommends that a more in-depth dialogue be created about the coexistence of fisheries and other activities at sea, for example in the market-driven dialogue forum in the Marine Plan or possibly the Marine Council.

The Fisheries Commission recommends that the core areas of fishing (i.e. where fishing is most efficient and profitable) be allocated to fishing activities and that methods for multi-use of areas be developed. Account must also be taken of areas that are essential for the fishery's resource base (spawning and nursery areas).



Recommendation 13:
Reduction of external pressure factors

The marine environment is affected by many man-made pressures. These are partly due to activities at sea and partly to activities on land, which have derived effects into the sea. The effects of the combined pressure factors on the marine environment are complicated by the fact that the individual pressure factors often work together, and combined effects are often stronger than the sum of the effects individually. For example, climate change can amplify the effect of nutrients.

Agriculture's emissions account for 70 percent of total nitrogen emissions to the marine environment, and agriculture is therefore the most important emitter. Nitrogen emissions from agriculture are a very significant challenge in terms of implementing the Water Framework Directive. The problem is greatest near the coast and generally applies to inner Danish waters [that is including the Danish parts of the Kattegat and the Baltic Sea].

In addition to nutrient emissions, the release of environmentally hazardous substances is estimated to be a pressure factor for the marine environment and fish stocks. The Fisheries Commission considers that the effects of these environmentally hazardous substances on marine ecosystems have not been sufficiently investigated. Other pressures affecting the marine environment are discussed in section 4.3.2 on the marine environment's impact on the fishery's resource base.

By reducing the most important external pressures, there will eventually be improvements in the marine environment, which will have a positive impact on marine ecosystems and marine biodiversity, and which will thus create a larger and more robust resource base.

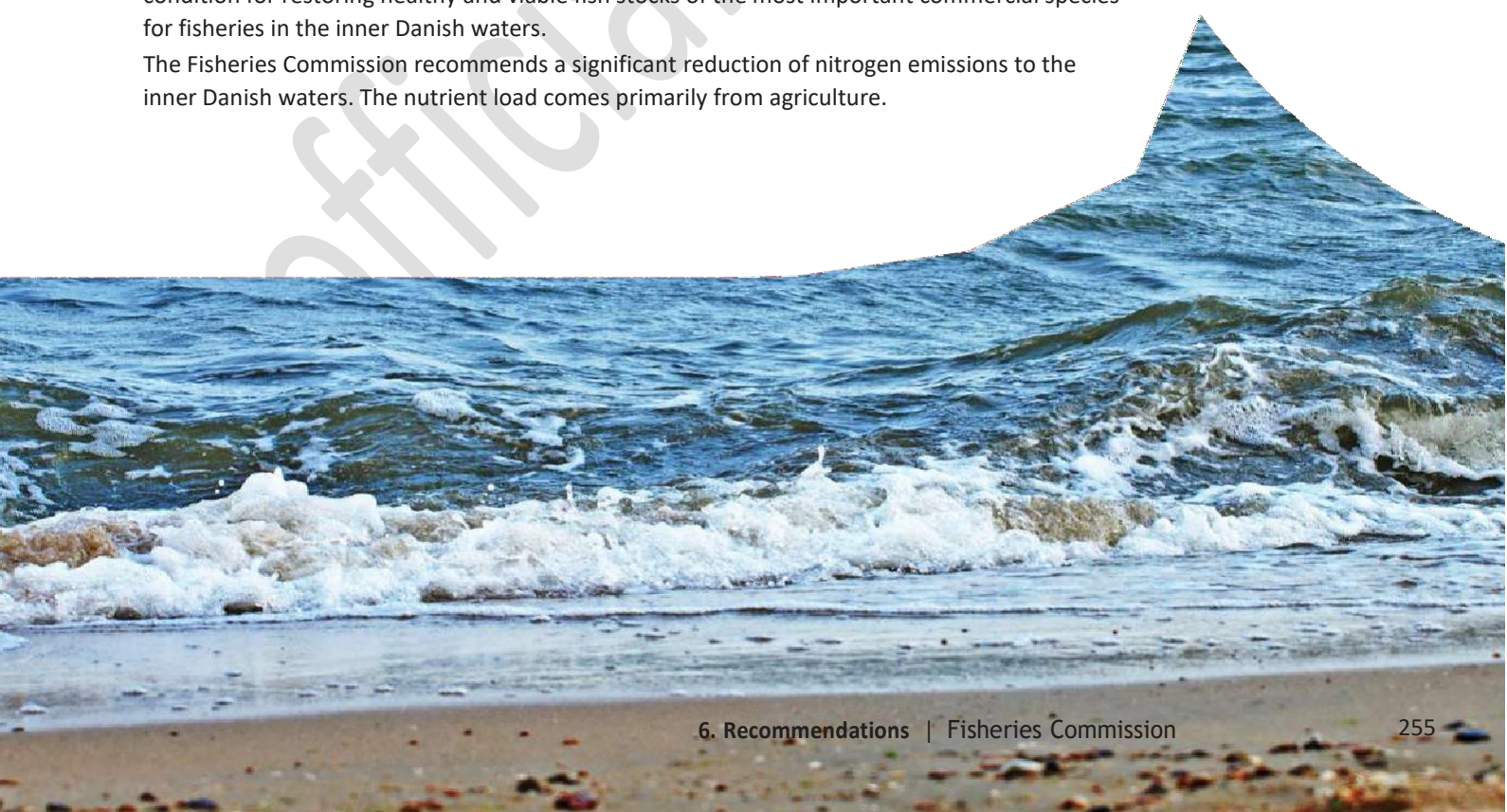
The recommendations are relevant for all fisheries.

THE FISHERIES COMMISSION RECOMMENDS:

13a Reduction of nitrogen emissions from agriculture

The Fisheries Commission considers that sufficient reduction of the nutrient load is a crucial condition for restoring healthy and viable fish stocks of the most important commercial species for fisheries in the inner Danish waters.

The Fisheries Commission recommends a significant reduction of nitrogen emissions to the inner Danish waters. The nutrient load comes primarily from agriculture.





13b Analysis of the presence of environmentally hazardous substances and the effect on fish stocks

The Danish waters are extensively affected by environmentally hazardous substances. The effect of these environmentally hazardous substances on marine organisms and fish populations have not been sufficiently investigated. The Fisheries Commission recommends that a greater analysis of the occurrence and effect of pollutants with potential effect on fish stocks be initiated, and in this situation the precautionary principle dictates that emissions must be reduced as much as possible.


6.5 Climate change recommendations

The recommendations in section 6.5 must be seen as a coherent package of measures that can be included in the goal of an industry that contributes to Denmark's climate goals for 2030 and 2050. Overall, the recommendations must promote technology development and implementation in both energy efficiency and conversion to green fuels. In this way, the recommendations must support that fisheries both contribute with CO₂ reductions to achieve the reduction target for 2030 and at the same time be prepared to transition to zero-emission vessels in line with Denmark's long-term goal of climate neutrality by 2050.

Recommendation 14: Support pool for energy efficiency of existing and new vessels

Several studies have concluded that there are a number of technological opportunities for energy efficiency improvements that are already used in shipping, but which are far from being fully utilised in the fishing fleet. Some of these are investment-heavy and thus primarily relevant for new and large vessels, but the low uptake of energy-efficient technologies is also due to regulatory, knowledge and economic barriers. The upcoming CO₂ tax will strengthen the incentives and improve the profitability of the various measures, but it is important that the development in the beginning can also be promoted through support schemes that can help to overcome the barriers. Danish energy policy has a long tradition of promoting energy efficiency through support pools upon application in many different areas.

Energy efficiency measures on existing and new vessels could lead to reductions in the fleet's consumption of marine diesel and thereby contribute to the 2030 target. The long service life of vessels means that energy efficiency improvements will also contribute to climate neutrality in



2050 and to future reduction targets in the intermediate period. Conversion to new green fuels is not yet technologically mature and will therefore only have a limited influence on the 2030 target, because it will initially be particularly relevant for the smaller proportion of vessels that are replaced in the final years before 2030.

The recommendation is relevant across all vessel segments. However, not all energy efficiency measures are relevant for all vessel segments. As described in section 4.4, the Fisheries Commission considers that it is inappropriate to regulate in detail which energy efficiency measures are sensible for the individual vessel segments, as this will have a negative impact on cost effectiveness.

THE FISHERIES COMMISSION RECOMMENDS:

14. 'Green fishing' support pool for energy efficiency measures on existing and new vessels.

The Fisheries Commission recommends supporting the climate transition in the fishing industry through the establishment of a 'green fishing' support pool for energy efficiency measures on existing and new vessels. Danish energy policy has a long tradition of promoting energy efficiency through variously designed support pools upon application. The Fisheries Commission advocates a model in line with the pools for green transport for trucks (I) and domestic ferries (II), where the allocation takes place with a given share of the costs and where the priority between applicants is based on the greatest effect per subsidy amount. This design is also recommended here, as there will probably be large variations in the cost-effectiveness of different measures, and it will probably be higher for new vessels than for existing ones. It is recommended that support for energy infrastructure in ports can also be included in the applications, including power capacity for battery charging and for shore power when, among other things, unloading.

In connection with the adoption of the CO₂ tax, 350 million crowns have been allocated for targeted support to fisheries for 2025-2029. The support pool should be temporary, but when revisiting the agreement in 2028, it should be decided whether the support scheme should possibly be extended for five years.



Recommendation 15: Demonstration project: The future climate-neutral fishing vessel

Denmark's long-term goal of climate neutrality by 2050 means that practically all vessels in the fishing fleet at that time must be emission-free. Today, there are no zero-emission vessels in the fishery, and the technology is far from ready. Since fishing vessels have a long service life, the vessels built in the coming years must be expected to operate in a climate-neutral society by 2050. It is therefore urgent to further develop and adapt emission-free energy technologies that can be used in fishing vessels. In order for Denmark to be a leading country in the green transition, including in the fishing industry, and to ensure a cost-effective, non-forced transition for Danish fisheries, Denmark must contribute to promoting the technological maturation of promising technical alternatives and to adapt them to the conditions for Danish fisheries. As part of this, an ambitious demonstration project should be established that supports the additional costs of investing in a new energy-optimized large vessel powered by climate-neutral energy.

Support for technology maturation can support the fishing industry in a cost-effective green transition. A demonstration project will be able to contribute important experiences in relation to how best to match the requirement for zero emission energy and an efficient fishing vessel, and thus also a fishing industry that is also commercially sustainable. The instrument will primarily contribute to the long-term goals of climate neutrality by 2050 through accelerated technology maturation and thus faster impact of zero emissions in the fishing fleet.

The recommendation focuses on the conversion of the largest vessels, which account for the vast majority of the fishing fleet's total energy consumption and CO₂ emissions. The cost-effectiveness of a development effort must be expected to be greatest here, also because technologies developed for the larger vessels in shipping will typically be more directly transferable to the large fishing vessels. At the same time, it is reasonable to expect spillover effects on the medium-sized vessels. For the smallest vessels, more space-consuming new fuels are difficult to implement and more relevant in a longer time perspective.

THE FISHERIES COMMISSION RECOMMENDS:

15. Demonstration project: Fishing vessels of the future based on alternative fuels

The Fisheries Commission recommends that the state provides support for an ambitious new construction project for the 'Future fishing vessel'. The support is given to the additional costs of investing in a new energy-optimized large vessel powered by climate-neutral energy. The project will be able to contribute with important experience in relation to how best to match requirements for both zero emission energy and an efficient fishing vessel, and thus also a fishing industry that is commercially sustainable.

Recommendation 16: Newly built vessels are being prepared for the transition to green fuels

The uncertainty about which fuels will prevail in the fishery in the long term creates significant risks when investing in new vessels. It is still far from clear what the future propulsion technology and energy carriers for climate-neutral fisheries will be, and it will be several years before operational concepts are ready for implementation in new vessels. However, with lifetimes of around 35 years, the new vessels that will be added before then will still be in operation when we need to be climate neutral by 2050 at the latest.

Green diesel, based on 'power-to-X', is technically the simplest solution, but alternatives such as methanol or ammonia may prove to be cheaper and therefore preferred as the climate-neutral fuel of the future in shipping and fisheries. Switching to these climate-neutral fuels will require new or rebuilt engines and larger tank capacity. The cost of 'retrofitting' an existing vessel for alternative fuels will, as a starting point, be significantly more expensive than the additional costs for future new vessels, where it is possible to optimize the size and design for the technical and safety changed requirements from the start. However, the future conversion costs for existing vessels at the time can be minimized by futureproofing the design of new vessels based on continuously updated knowledge of the technical requirements of climate-neutral operation, for example in relation to tank volume.

The Fisheries Commission considers that it should be investigated as soon as possible what measures should be taken to establish a concept that supports a climate transition in fisheries in order to achieve climate neutrality in 2050, and that on the basis of the conclusions, it is required that new vessels are prepared for green fuels.

Clear requirements for new vessels to be prepared for transition to other fuels could contribute to faster phasing-in of climate-neutral fuels and to risk minimizing the costs of converting existing vessels to climate neutrality. The measure will primarily have an effect in relation to the 2050 target.

The recommendation is initially relevant for larger vessels and will probably, as concepts for climate-neutral propulsion technologies are developed, be transferable to medium and small vessels.

Future-proof design will increase investment costs for vessel owners. This will in the short term negatively affect the profitability of new vessels, which must be weighed against a risk minimization of the costs of conversion to green fuels when these are developed. To the extent that the concepts can be transferred to smaller vessels, this could create a basis for climate-neutral coastal fisheries. Better retrofitting options for existing vessels will be able to contribute to faster phasing-in of new green fuels and thus for climate-neutral fisheries in 2050.

THE FISHERIES COMMISSION RECOMMENDS:

16. Requirement for new vessels to be prepared for green fuels

The experience from the above demonstration project and similar projects in other countries and with alternative fuels in shipping in general should be consolidated into a concept for how new vessels can best be future-proofed to later transition to climate-neutral fuels, which are expected to come into play towards 2050. The design can be adjusted and concretized as more knowledge is gained about which way the technological development is going. Initially, the initiative should be characterised as advice and guidelines and be sharpened to actual requirements when enough consolidated knowledge is available.



Recommendation 17: Continued increase of the CO₂ tax after 2030

It can be expected that, in practice, energy efficiency measures can only achieve a small proportion of the total potential before 2030. This means that energy savings in the fishing fleet will only be able to contribute to the 2030 goal with a modest fraction of the current emissions of approximately 0.3 million tonnes of CO₂ per year. Subsequently further and probably more expensive measures will be needed to reduce fisheries' CO₂ emissions to net-zero by 2050. Ultimately, there will be a need for a full transition to climate-neutral fuels, either through gradually increasing blending requirements or through fossil fuels becoming more expensive at some point than the alternative green fuels. The Fisheries Commission considers that a gradual increase in the CO₂ tax will be a cost-effective – and probably necessary – contribution to achieving these further energy efficiency improvements and to the fishing industry switching to alternative green fuels when this becomes possible. The latter will presumably require that the CO₂ tax in the long term will be much higher than today. This is parallel to other sectors where there will also be a need for the CO₂ tax to be gradually increased after 2030 and towards 2050 in order to fully phase out the use of fossil energy.

A precise formation of expectation of ever-increasing costs from the use of fossil fuels can contribute to the transition to green fuels being included in the long-term investments in new fishing vessels. This will lead to a faster phasing-in of these vessels and will thus contribute to the goal of climate neutrality by 2050.

THE FISHERIES COMMISSION RECOMMENDS:

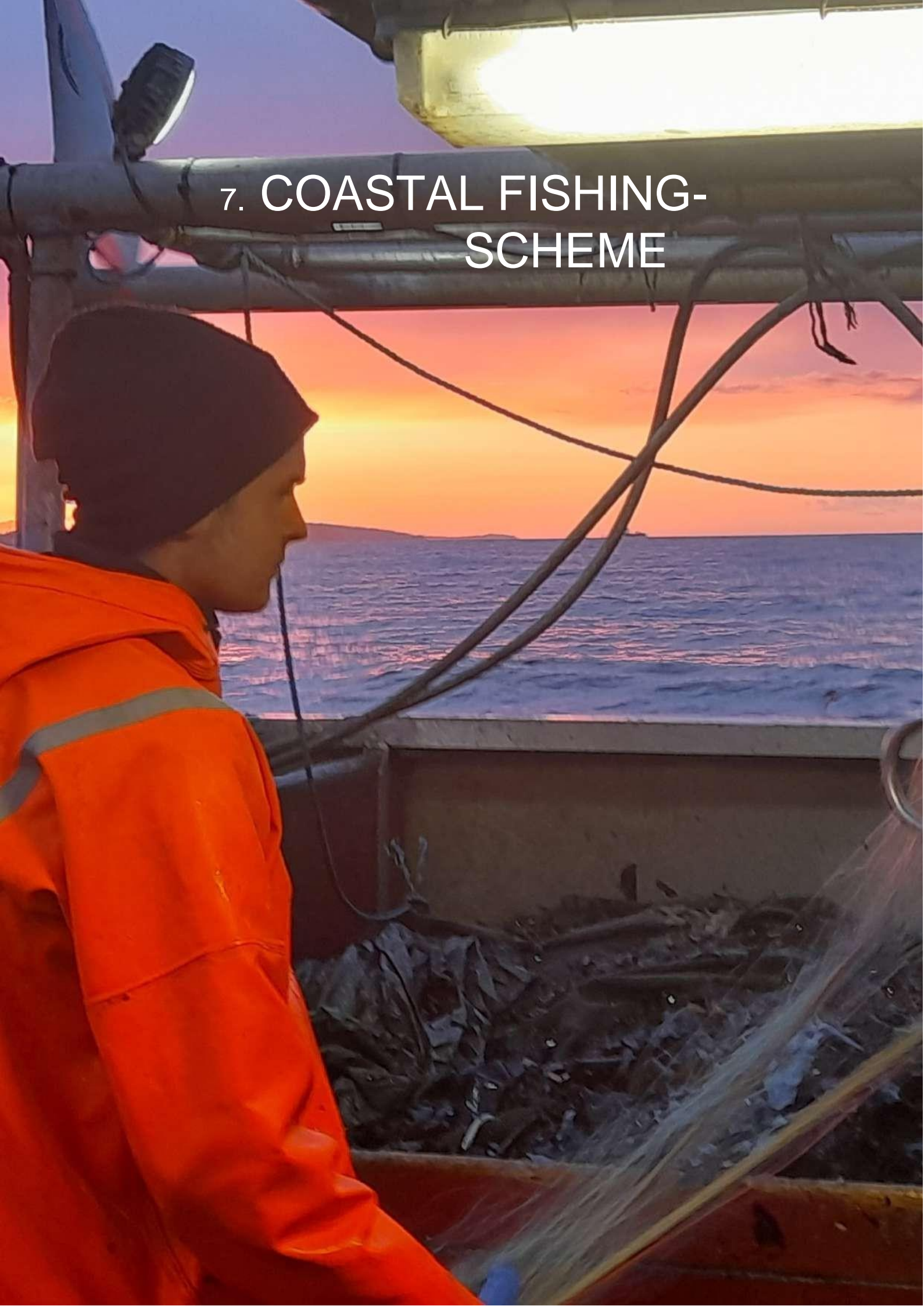
17. Announcement of a continued increase in the CO₂ tax after 2030

The Fisheries Commission, like many others, considers that a gradual increase in the fishing industry's CO₂ tax will be a cost-effective, and probably necessary contribution to achieving further energy efficiency improvements and to the long-term transition to alternative green fuels. The latter will presumably require that the CO₂ tax in the long term will be much higher than today. This is parallel to other sectors where there will also be a need for the CO₂ tax to be gradually increased after 2030 and towards 2050 in order to fully phase out the use of fossil energy. A uniform CO₂ tax across sectors contributes to a cost-effective achievement of Denmark's climate goals.

The Fisheries Commission recommends that a political announcement be made stating that the gradual increase in the CO₂ tax for fisheries must be expected to continue after 2030, and that the tax must eventually reach a level that provides sufficient incentives for full conversion to green fuels with a view to a climate-neutral fishery by 2050. A precise formation of expectation of ever-increasing costs can help to incorporate the transition to green fuels in the long-term investments in new fishing vessels already today.

The Fisheries Commission acknowledges that full conversion to green fuels will entail significant additional costs for the industry and bunkering abroad for large parts of the fishing fleet, but of course only if the countries around us do not follow suit. However, the Fisheries Commission assumes that the cost of green fuels is a direct consequence of an ambition for climate-neutral fisheries and estimates that a precise formation of expectation of ever-increasing costs can contribute both to reducing the overall conversion costs for fisheries and to promoting the transition to green fuels and thus the goal of climate neutrality by 2050, because the cost increase is taken into account in the long-term investments in new fishing vessels.

7. COASTAL FISHING- SCHEME



This chapter describes the Fisheries Commission's considerations on the Coastal Fishing Scheme. These considerations are based on the government's coalition agreement section 4.4 on the marine plan and development of the Danish fishing industry and the desire that the Coastal Fishing Scheme be included in the Fisheries Commission's work. The content and purpose of the current scheme is first described, followed by the Fisheries Commission's recommendation on how the Coastal Fishing Scheme should be organized in the future.

Based on the government's coalition agreement, the Fisheries Commission has presumed that there is a political will to do something specific to support coastal fisheries, and that the Fisheries Commission has been asked to provide a recommendation on how this can be executed based on the current situation - both in fisheries and management.

The current Coastal Fishing Scheme – purpose and content

The Coastal Fishing Scheme was introduced in 2002 and has, to some extent in collaboration with industry and other stakeholders, been revised a number of times. The current scheme²³⁵, which was last amended in 2020 as described in the political agreement on the Coastal Fishing Scheme from 2019, aims to ensure and further develop coastal fisheries with a focus on the use of environmentally friendly fishing methods that protect the marine environment as much as possible. The Coastal Fishing Scheme must also support generational changes and contribute to strengthening the smaller ports²³⁶.

The Coastal Fishing Scheme consists of annual quantities of fish that are reserved for the vessels that are enrolled in the Coastal Fishing Scheme. More specifically, a proportion of the Danish quotas for cod, sole and plaice has been allocated to the scheme. For vessels in the Coastal Fishing Scheme, quantities are also allocated to a ration fishery²³⁷ for sprat, herring, Norway lobster, saithe, turbot and whiting. Vessels that fish gently according to the definitions in the scheme (see below) receive larger additional annual quantities than other vessels. These additional annual quantities (cod, sole, plaice) are triggered when the vessels have reached part of their own annual quantities. The extra quantities are distributed in up to three portions. The first third of the extra quantity will be distributed no later than 1 February. The second third will be distributed by 31 May if the vessel at that time has landed at least one third of its annual allocated volume of applicable quota.

235 Executive Order of the Fisheries and Fish Farming Act (the Fisheries Act) - § 104-112- LBK no. 205 of 01/03/2023. 2023) Danish Ministry of Fisheries Retrieved from <https://retsinformation.dk/eli/Ita/2023/205>.

236 Politisk aftale om yderligere styrkelse af kystfiskerordningen of 11 November 2019(2019). Retrieved from: https://fvm.dk/fileadmin/user_upload/MFVM/Nyheder/Aftale_om_yderligere_styrkelse_af_kystfiskerordningen.pdf

237 Ration fishing is fishing on a common amount that several vessels have access to on the basis of the vessel's location or permission.

The last third shall be distributed by 30 September if at that time the vessel has landed at least two thirds of its annual allocated quantities for the quota in question. If a larger part of the annual quota has been landed early in the year, all three portions of the extra amounts can be allocated at that time. If the quantities allocated to the scheme are not fully utilised, the residual quantities will be distributed to vessels outside the scheme.

Three requirements must be met in order to obtain additional quantities in the Coastal Fishing Scheme:

- At least 80 percent of the fishing trips must be no more than 48 hours;
- The vessels must be a maximum of 17 meters; however, the size limit is a maximum of 15 meters for vessels that fish with non-gentle gear in the closed system (see below);
- Vessels may not lease quotas to vessels outside the scheme.

The Coastal Fishing Scheme consists of an open (time-limited) and a closed (unlimited time) part:

- In the open scheme, the quota owners' shares are not permanently bound in the scheme, and they can therefore be withdrawn from the scheme with a notice of 3 years. After the binding period, it is therefore also possible to sell quota shares and annual quantities to vessels outside the scheme. The open part of the Coastal Fishing Scheme was extended for one year on 1 January 2023 and is due to expire on 31 December 2023. In November 2023 the Ministry of Food, Agriculture and Fisheries submitted a proposal for amendment of the regulatory order for consultation, in which it is proposed to extend the open part of the scheme for one year.
- In the closed scheme, fishermen are allocated larger additional quantities than in the open scheme, but on the other hand, they can only sell their quotas to vessels in the unlimited time (closed) scheme. Newly established fishermen have the opportunity, under certain conditions, to leave the closed system with their quota shares within 3 years of registration.

The groups of vessels in coastal fisheries are further divided into gentle and other fisheries. In the regulation order, it is defined which gear in the scheme are described as gentle. Gentle fishing in practice consists primarily of gill net fishing and Danish seine fishing, where other fishing is primarily trawl fishing. If you meet the criteria for the gentle part, the extra amount is larger. In 2020, the Coastal Fishing Scheme was revised to better target additional quantities for vessels that practice gentle fishing in the closed scheme.

Shares of the Danish quotas in the current system

The following percentages of the Danish quotas are allocated to the Coastal Fishing Scheme (Table 7.1). Vessels that are enrolled in the scheme can also, as mentioned, carry out ration fishing on sprat, herring, Norway lobster, saithe, turbot and whiting.

Table 7.1 Coastal Fishing Scheme shares of total quota divided by species and waters.

Species	Waterway	Coastal fishing scheme, Section 104	Coastal Fishing Scheme ration sections 35 and 92
		%	%
Sprat	The Baltic Sea		3.23%
Herring	Western Baltic Sea		4.11%
Herring	Eastern Baltic Sea		4.11%
Norway Lobster	North Sea without Norwegian zone		0.82%
Norway Lobster	Skagerrak, Kattegat and Baltic Sea		1.05%
Saithe	North Sea, Skagerrak and Kattegat		2.75%
Turbot and Whiting	North Sea		1.67%
Plaice	Kattegat	4.79%	
Plaice	North Sea	1.39%	
Plaice	Skagerrak	6.44%	
Plaice	The Baltic Sea	7.39%	
Cod	Kattegat	6.76%	
Cod	North Sea	7.00%	
Cod	Skagerrak	13.46%	
Cod	Western Baltic Sea	13.60%	
Cod	Eastern Baltic Sea	7.50%	
Sole	North Sea	9.60%	
Sole	Skagerrak, Kattegat and Baltic Sea	9.83%	

Source: Annex 4 of the Executive Order of the Fisheries and Fish Farming Act (the Fisheries Act)²³⁸

*Developments in coastal fisheries*²³⁹

As described in Section 4.4, the number of vessels across the Danish fishing fleet has decreased - both as a result of fewer fish landings and consolidation in larger vessels, but the number of vessels in the Coastal Fishing Scheme has decreased relatively more (16 percent) than for vessels under 17 meters outside the scheme (2 percent). As can be seen from Table 7.2, the entire decrease occurs in the open scheme from 2019 to 2020, when the scheme was revised in favour of the closed scheme. The decline is of 49 vessels, corresponding to just under a quarter, while the closed scheme at the same time increases by 8 vessels. The percentage decrease in the coastal fishing fleet is greater for commercially active vessels and the gentle fishing, while commercially active vessels under 17 meters outside the Coastal Fishing Scheme have increased slightly, probably when some vessels from the open scheme transferred to this group.

238 Bekendtgørelse af lov om fiskeri og fiskeopdræt (fiskeriloven) - § 104-112- LBK no. 205 of 01/03/2023. 2023) Danish Ministry of Fisheries Retrieved from <https://retsinformation.dk/eli/lta/2023/205>.

239 Mainly based on Nielsen, M., & Nielsen, R., (2022). Udviklingen i dansk kystfiskeri 2018-2021, Department of Food and Resource Economics, IFRO. Retrieved from: https://static-curis.ku.dk/portal/files/316508035/IFRO_Udredning_2022_22.pdf

Table 7.2 Number of vessels under 17 meters, broken down by segments. 2018-2021.

Vessel Group

Vessel Group	2018	2019	2020	2021	Change 2018-2021
Open Scheme	187	188	139	137	-26%
Of which gentle	74	78	55	51	-31%
Closed Scheme	62	62	70	73	18%
Of which gentle	52	53	54	56	8%
Total coastal fishing	249	250	209	210	-16%
Of which commercially active ¹⁾	184	170	136	139	-24%
Other vessels under 17 m	988	950	968	930	-6%
Of which commercially active ¹⁾	177	171	181	180	2%

1) Commercially active vessels include vessels with an annual catch value of at least 270,000 DDK

Source: Nielsen & Nielsen (2022)²⁴⁰

If you look at the catch value for commercially active vessels in Table 7.3 a similar pattern appears, but there is also a decrease for the closed scheme. For the non-gentle segment of the open scheme, the decrease in catch value is significantly greater than for the number of vessels. For vessels under 17 meters outside the Coastal Fishing Scheme, the decline is modest (-4%) and significantly less than for Danish fisheries as a whole (-14%), again probably because some vessels from the open scheme were transferred to this segment. Vessels under 17 meters landed just under 20 percent of the total catch value from commercial vessels in 2021 - and about a third of the demersal landings corresponding to 457 million DDK²⁴¹



240 Nielsen, M., & Nielsen, R., (2022). Udviklingen i dansk kystfiskeri 2018-2021, Department of Food and Resource Economics, IFRO. Retrieved from: https://static-curis.ku.dk/portal/files/316508035/IFRO_Investigation_2022_22.pdf

241 Andersen, J. L., Hoff, A., Nielsen, R., Nielsen, M., & Frost, H. S. (2023). Et historisk overblik over dansk fiskeri. IFRO, Department of Food and Resource Economics. Table 3.3.

Table 7.3 Catch value for commercially active vessels¹⁾ below 17 meters, divided into segments. 2021

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Gnm *
Tobis	94.0%	86.1%	53.4%	26.9%	80.4%	78.8%	81.3%	82.9%	72.9%	94.1%	75.1%
Sperling	21.5%	24.6%	10.3%	7.6%	8.2%	10.9%	62.9%	87.1%	34.9%	35.0%	30.3%
Sprat (North Sea)	45.2%	100.9%	88.4%	87.9%	63.1%	97.6%	96.9%	99.7%	67.7%	120.6%	86.8%
Sprat (Skagerrak)	5.2%	74.4%	56.1%	30.0%	4.7%	14.9%	66.8%	56.3%	25.7%	43.5%	37.8%
Blue whiting	63.8%	57.3%	99.9%	99.4%	89.9%	96.3%	92.6%	91.9%	89.9%	101.1%	88.2%
Boarfish	66.9%	28.0%	0.1%	3.4%	6.9%	1.6%	12.8%	6.7%	73.4%	84.7%	28.5%

1) Commercially active vessels include vessels with an annual catch value of at least 270,000 DDK

Source: Nielsen & Nielsen (2022)²⁴²

The estimated full-time employment on commercially active vessels in the Coastal Fishing Scheme decreased from 219 to 168 in the period 2018-2020²⁴³; for comparison as described in section 3.4, the total full-time employment at the catch stage in Danish fisheries is about 1,000 people.

Overall, the development has also resulted in a decrease in returns for vessels in the Coastal Fishing Scheme²⁴⁴. From 2018 to 2020, the return decreased from 1.3% to -1.0%, while other vessels under 17 meters increased from -0.6% to 1.1% in the same period. The return for the fishing fleet as a whole is significantly higher but has also fallen: from 4.4% to 3.3%.

Nielsen & Nielsen (IFRO 2022)²⁴⁵ estimates that the 2020 version, which strengthened the closed system for gentle fishing, seems to have partially succeeded, not by increased activity, but by mitigating the negative consequences of the decline in cod fisheries in the Baltic Sea. However, as the closed part represents only about a third of the fleet (measured by number of vessels) and about a fifth of the catch in the Coastal Fishing Scheme (measured by catch value), it does not change the impression of a significant decrease in coastal fisheries within just the last three years. It can however be noted that there are large regional differences in development.

242 Nielsen, M., & Nielsen, R., (2022). Udviklingen i dansk kystfiskeri 2018-2021, Department of Food and Resource Economics, IFRO. Retrieved from: https://static-curis.ku.dk/portal/files/316508035/IFRO_Investigation_2022_22.pdf

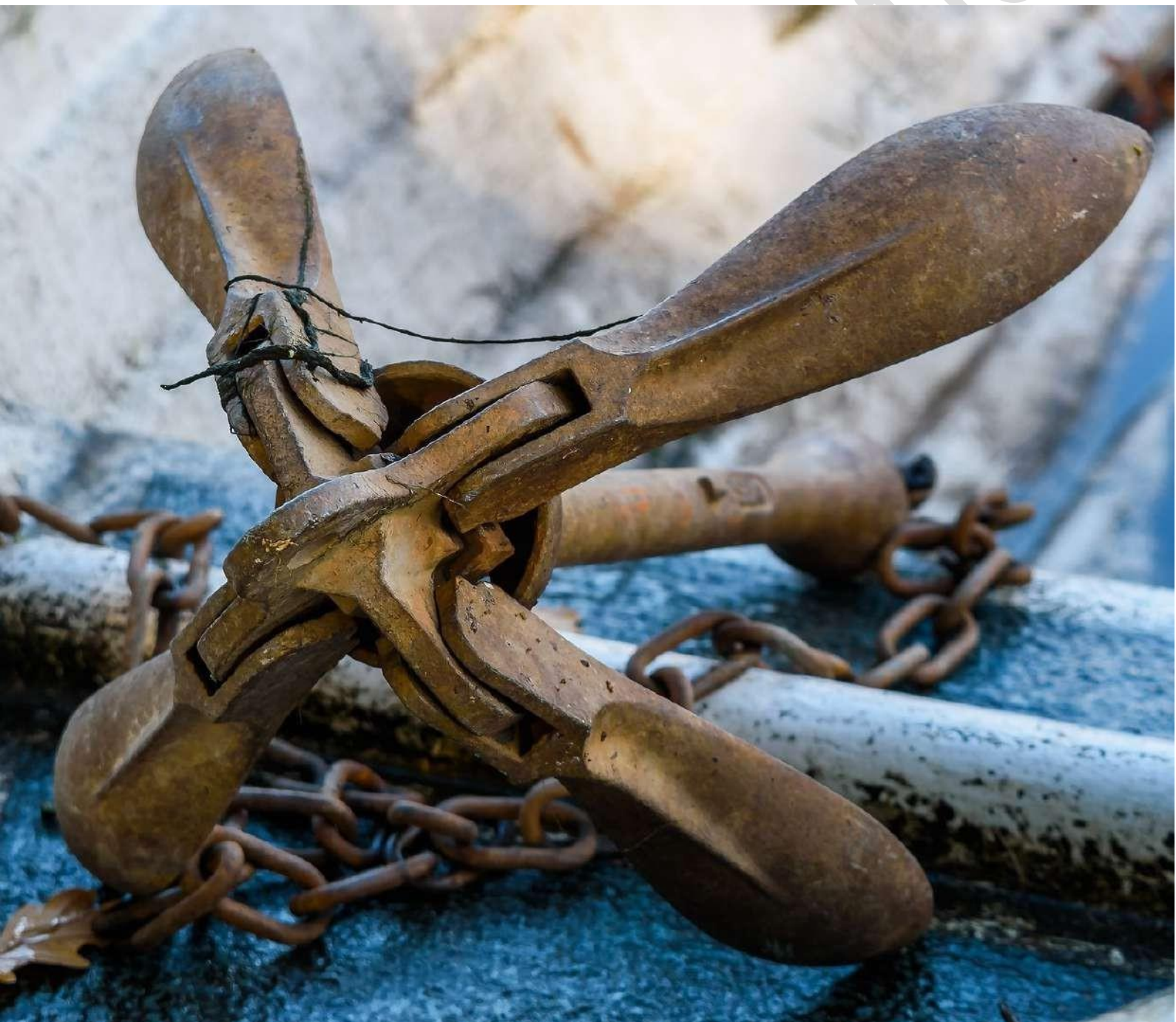
243 In the closed part of the coastal fishing scheme, the number of full-time employees fell from 42 to 37 in the period 2018-2020. For the open part, the corresponding numbers were 177 to 131. For vessels under 17 meters outside the coastal fishing scheme, the number of full-time employees increased from 126 to 128 in the period 2018-2020. 2022

244 Based on Statistics Denmark's Accounting statistics for Fisheries. The return is calculated as the operating result divided by the assets, the operating result is deducted from a calculated remuneration to the owner.

245 Nielsen, M., & Nielsen, R., (2022). Udviklingen i dansk kystfiskeri 2018-2021, Department of Food and Resource Economics, IFRO. Retrieved from: https://static-curis.ku.dk/portal/files/316508035/IFRO_Investigation_2022_22.pdf

Coastal fisheries' home ports

Tables 7.4 and 7.5 (IFRO, 2023) show that the vessels under 17 meters are spread out over many home ports. The port of origin is used as a proxy for landings, as the vessels often land their catches here, although this does not necessarily happen in all cases. For commercial vessels, the 20 most important ports cover 72 percent of the landing value in 2012, which rises to 82 percent in 2022. For the non-commercial vessels, the concentration is even smaller, as the 20 most important ports in 2012 cover 44% of the landing value, which increases to 50% in 2022. However, Hanstholm, Hirtshals and Hvide Sande are generally the three most important ports for these vessels. As can also be seen in section 3.2 the concentration of landings around the larger ports is much more pronounced for the vessels over 17 meters. For example, the demersal vessels over 17 meters land 94 percent of their catches in the 10 most important ports. The pelagic vessels land over 75 percent of their catches in Skagen and Hirtshals.



Based on the vessels that in 2022 were covered by the Coastal Fishing Scheme, 17 out of 213 vessels had a volume measured in gross registered tonnes (GRT) of over 50. Among these, 9 vessels (53 percent) had a home port in one of the 4 largest ports (Skagen, Hirtshals, Hanstholm, Thyborøn). The corresponding figure for the other vessels in the scheme (less than 50 GRT) was 22%²⁴⁶.

In general, the smaller vessels (less than 17 meters) seem to land the majority of their catches in the smaller ports, and among the vessels that are currently part of the Coastal Fishing Scheme, the smaller vessels are more often than the larger vessels linked to the smaller ports.

Table 7.4 Landing value (1,000 DDK) and distribution of landing value (%) in 2012 and 2022 for the 20 most significant home ports for commercial vessels under 17 meters

Most significant ports in 2012			Most significant ports in 2022		
Port	Landing value	Distribution	Port	Landing value	Distribution
Hirtshals	42,940	8.7%	Hanstholm	55,870	13.3%
Hanstholm	26,296	5.3%	Hirtshals	40,080	9.5%
6960 Hvide Sande	25,001	5.1%	Skagen	30,762	7.3%
Nexø	23,584	4.8%	Strandby (North Jutland)	24,092	5.7%
Skagen	22,583	4.6%	6960 Hvide Sande	22,311	5.3%
Thorsminde	21,998	4.5%	Spare Bearing	19,002	4.5%
Kerteminde	21,291	4.3%	Kerteminde	17,922	4.3%
Thorup Strand	18,512	3.8%	Thorup Beach	16,932	4.0%
Spare Bearing	18,186	3.7%	Thorsminde	16,141	3.8%
Strandby (North Jutland)	17,562	3.6%	Nexø	15,346	3.7%
Thyborøn	17,133	3.5%	Østerby	15,207	3.6%
Bagenkop	15,855	3.2%	Thyborøn	13,827	3.3%
Tejn	13,474	2.7%	Søby	8,735	2.1%
Østerby	12,437	2.5%	Tejn	8,336	2.0%
Rødvig	11,178	2.3%	Bagenkop	7,950	1.9%
Vesterø	10,634	2.2%	Esbjerg	7,545	1.8%
Port of Klintholm	10,536	2.1%	Vesterø	6,620	1.6%
Sønderborg	8,185	1.7%	Bønnerup	6,285	1.5%
Kalvø	8,176	1.7%	Grenå	5,986	1.4%
Langø	8,042	1.6%	Ebeltoft	5,198	1.2%
Total, 20 main ports	353,604	72%	Total, 20 main ports	344,149	82%
Total, all ports	492,617	100%	Total, all ports	420,004	100%

Note: (i) The data represent vessels registered as of 31 December in a given year,

and (ii) a commercial vessel has a landing value above the minimum limit (DKK 270,000 from 2012 onwards).

Source: Extracts from the Danish Fisheries Agency's vessel and settlement register on 17 February 2023.

Table 7.5 Landing value (1,000 DDK) and distribution of landing value (%) in 2012 and 2022 for the 20 most significant home ports for non-commercial vessels under 17 meters

Most significant ports in 2012			Most significant ports in 2022		
Port	Landing value	Distribution	Port	Landing value	Distribution
Hirtshals	3,488	5.9%	Hirtshals	2,598	7.1%
Hvidesande	2,923	5.0%	Hvidesande	2,133	5.8%
Hanstholm	2,913	4.9%	Hanstholm	1,682	4.6%
Thyborøn	1,584	2.7%	Kerteminde	1,169	3.2%
Bønnerup	1,470	2.5%	Frederikshavn	964	2.6%
Gilleleje	1,128	1.9%	Østerby	830	2.3%
Ålbæk	1,049	1.8%	Bagenkop	791	2.1%
Skagen	1,403	1.8%	Stubbekøbing	786	2.1%
Kerteminde	1,018	1.7%	Thyborøn	745	2.0%
Rødvig	1,004	1.7%	Vedbæk	739	2.0%
Thorsminde	926	1.6%	Thorsminde	690	1.9%
Frederikshavn	921	1.6%	Skærbæk	648	1.8%
Stubbekøbing	874	1.5%	Strandby (Northern Jutland)	600	1.6%
Ringkøbing	843	1.4%	Gilleleje	591	1.6%
Klintholmhavn	799	1.4%	Spodsbjerg	579	1.6%
Lemvig	775	1.3%	Odden	568	1.5%
Årsdale	773	1.3%	Kalvehave	556	1.5%
Bagenkop	765	1.3%	Skagen	551	1.5%
Strandby (Northern Jutland)	751	1.3%	Ålbæk	525	1.4%
Langø	738	1.3%	Ringkøbing	516	1.4%
Total, 20 main ports	25,784	44%	Total, 20 main ports	18,260	50%
Total, all ports	58,906	100%	Total, all ports	36,846	100%

Note: (i) The data represent vessels registered as of 31 December in a given year, and (ii) a commercial vessel has a landing value above the minimum limit (DKK 270,000 from 2012 onwards).

Source: Extracts from the Danish Fisheries Agency's vessel and settlement register on 17 February 2023.

The Fisheries Commission's considerations on the future Coastal Fishing Scheme

Based on the terms of reference, the Fisheries Commission considers that there should continue to be mechanisms in fisheries management that support parts of Danish fisheries in view of its importance for, among other things, activity in fisheries-dependent communities, growth and employment and its cultural significance in a broader sense. The overall purpose of a Coastal Fishing Scheme must therefore be to ensure stable fisheries from smaller vessels that fish in proximity of the coast on local resources and with gear that has the least possible impact on the ecosystems corresponding to the purposes set out in the political agreement behind the current scheme.



It is however clear that there is a need to adapt the current scheme with a view to making it sufficiently attractive to participate in the scheme. As described above, the number of smaller vessels has steadily decreased²⁴⁷ over the past 15 years. Parts of the development were to be expected as part of the concentration of the catch on larger and fewer vessels in each vessel segment after the introduction of transferable quotas in Danish fisheries. The Coastal Fishing Scheme has helped to support fisheries with smaller vessels, but profitability in coastal fisheries is low and in large parts downright negative²⁴⁸, when you include a normal remuneration of the vessel owner who is an active fisherman. Vessels in the Coastal Fishing Scheme account for a decreasing share of the total catch value for commercial vessels under 17 meters, and today it amounts to approximately half. The closed scheme, where the restrictions on participation are the greatest (especially related to the binding of quota shares and the resulting possible nervousness about

246 Extract from Statistics Denmark -<https://www.statistikbanken.dk/statbank5a/default.asp?w=1920>

247 Nielsen, M., & Nielsen, R., (2022). *Udviklingen i dansk kystfiskeri 2018-2021*, Department of Food and Resource Economics, IFRO. Retrieved from: https://static-curis.ku.dk/portal/files/316508035/IFRO_Investigation_2022_22.pdf

price when selling these), accounts for less than 10 percent of the catch value for all commercial vessels under 17 meters. In addition, the utilisation rate of the extra quantities in the scheme is generally low (below 50 percent) and has been decreasing since 2018. In light of this, the Fisheries Commission finds that a continuation of the current set-up without changes entails a real risk of a further decline for coastal fisheries, and that this would be contrary to the wishes in the terms of reference. The Fisheries Commission also considers it important that the additional allowances awarded for environmentally friendly fisheries are continuously updated and created based on the latest available knowledge about how fisheries can affect ecosystems as little as possible. An essential element of a future Coastal Fishing Scheme should therefore be that there is an ongoing professional review of the types of gear that can be characterized as environmentally friendly in relation to their actual use in space (where the gear is used) and time (when (during the year) the gear is used).

It is also important that the future design of the Coastal Fishing Scheme is seen in close connection with the other recommendations of the Fisheries Commission that affect coastal fisheries, including in particular recommendation 9 on facilitating the possibility of part-time employment for coastal fishermen and subsidies for, among other things, infrastructure in smaller ports, and recommendation 12 which entails that in selected areas within 12 nautical miles, smaller vessels that fish environmentally friendly are taken into account.

In light of the above, the Fisheries Commission bases its considerations and trade-offs on the following:

- Fishing with smaller vessels generally (primarily due to the proportion of passive gears) has a lower emission of CO₂ compared to the value of landings than other vessels (pelagic and industrial fisheries excepted). Furthermore, lighter mobile fishing gear with bottom impact on smaller vessels - all other things being equal - have a lower degree of bottom impact than heavier mobile fishing gear with bottom impact on larger vessels.
- Smaller vessels generate less resource rent than larger vessels, and the earnings can also be very low. However, smaller vessels are estimated to have an economic potential to be used for other activities during parts of the year (e.g. tourism).
- Smaller vessels, due to the relatively smaller need for funding, constitute a special opportunity for recruitment and generational change, where a new fisherman can get a foot on his own deck. However, the working environment on board smaller vessels can be challenging.
- The presence of active, locally based fisheries is important for the opportunities to utilise short supply chains and therefore the opportunity to (re)create a closer connection between the fishing industry and consumers in order to increase interest in local fish including fish in season and less known, underutilised species. There may however be challenges with handling catches on board in relation to quality.
- Fishing with smaller vessels will in some cases be better suited to co-exist with other activities than fishing with larger vessels, although fishing with smaller vessels may also be particularly vulnerable to an increase in activities that occupy coastal areas due to its relative 'locality' and lower mobility.

- Smaller vessels use a relatively wide range of gear, which constitutes an important bank of knowledge and experience; in addition, in coastal fisheries there is a pool of knowledge of local ecological conditions, e.g. special knowledge of local fishing grounds, which enables innovation and utilisation of local resources of smaller volumes, which cannot be utilised by larger vessels.
- Coastal fisheries carries a 'culture of its own', which to a certain extent is different from the culture carried by fisheries with larger vessels. The presence of both large and small vessels in the fishery increases the breadth of the available 'ways of life' in the fishing industry ('ways of being a fisherman'), which provides increased opportunities for recruitment and probably also well-being in a broad sense.
- Although a significant proportion of the landings from smaller vessels take place in the larger ports, smaller vessels land in smaller ports to a greater extent than larger vessels, and the presence of active, locally anchored fisheries with smaller vessels contributes to tourism in some local areas/coastal communities.
- The introduction of fully documented fisheries, which the Fisheries Commission sees as a central component of future fisheries management, can be costly for smaller vessels when it is related to turnover and earnings.

As mentioned above, the Fisheries Commission's assessment is that, in the light of the terms of reference, there is a need to revise the existing scheme so that coastal fisheries, including participation in the Coastal Fishing Scheme, is made more attractive.



Against this background, the Fisheries Commission *recommends* the following:

1. The Coastal Fishing Scheme will be established as **one scheme** which can basically accommodate (the vast majority of) the vessels that are in or can be registered in one of the schemes as they are today, i.e. vessels under 17 meters that have 80 percent of their fishing trip under 48 hours. It is however the Fisheries Commission's understanding that since the establishment of the Coastal Fishing Scheme, there has been a development in vessel technology which contributes to the fact that a number of vessels under 17 meters today have a capacity and radius of action that can be seen as contrary to the intentions of the scheme, and which also significantly land in large ports. It is therefore recommended to supplement the length limit of 17 meters with additional size restriction of horsepower (HP) and/or gross registered tonnage (GRT).
2. In order to prevent the ongoing sale of quota shares from the coastal fishery - and therefore to increase the possibility of establishing a real coastal fishing segment in its own right - the Fisheries Commission's assessment is that the most effective solution would be for the Coastal Fishing Scheme to be established as **one closed scheme** where, in exchange for gaining access to the extra quota quantities found in the scheme, you bind your quotas.

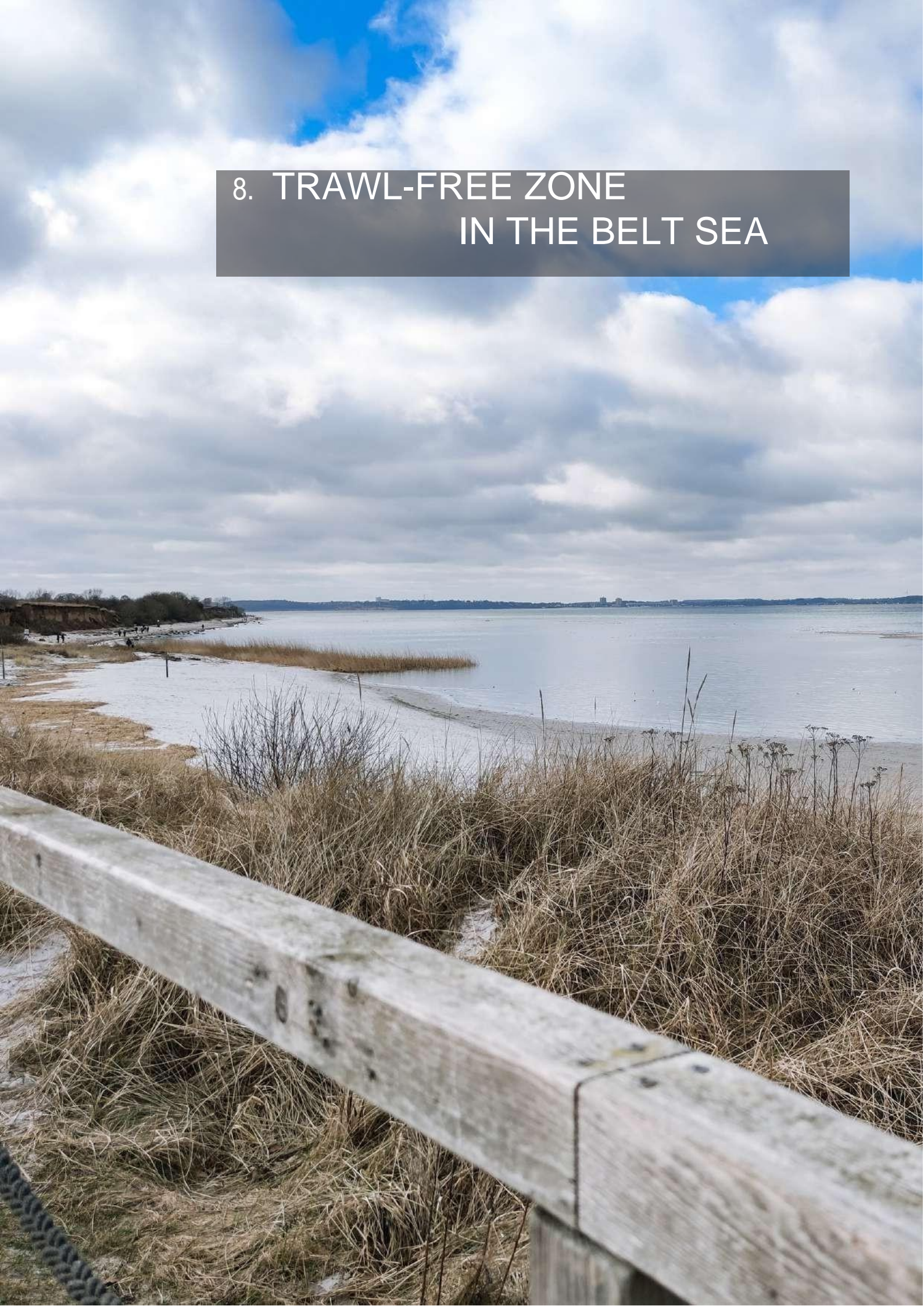
It is the opinion of the Fisheries Commission that it has so far not been attractive enough to commit to the open-ended (closed) scheme. It is therefore crucial that the attractiveness of the new scheme is increased and maintained.

3. All vessels that meet the new size limitation can receive additional quota quantities, but it is assumed that relatively larger additional quantities are still given to smaller vessels that fish environmentally friendly - more or less in line with the scheme today. However, as mentioned above, an ongoing assessment of the conditions for obtaining additional quota surcharges should be carried out to ensure that it is the fishery (assessed on gear as well as its practical use in time and space) with the lowest environmental impact that can get the highest quota supplement.
4. The vessels that are currently part of the open system, but which are prevented from participating in the new, closed system in the future due to the changed size limitation (see point 1), may have to be offered to participate on a dispensation, possibly during a transition period - or handled in another way so that the changes are not immediately perceived as too intervening.
5. All vessels joining the closed scheme from the beginning will have the possibility to leave the scheme with the quota shares they brought into the scheme after a trial period (e.g. 3 years). After that, this rule will only apply to newly established fishermen.
6. It is crucial that the scheme is and remains attractive (and with the opportunity to grow). If it becomes necessary to add new quota quantities to the Coastal Fishing Scheme, these quantities should be provided by state purchases of quota shares among the other fisheries (Group 1).
7. If non-quota species are transferred to quota, it should be ensured, to the extent that it makes sense for coastal fisheries, that relevant quantities are set aside for the Coastal Fishing Scheme before distribution of quotas.

The new Coastal Fishing Scheme should be continuously monitored and - in order to evaluate the scheme's effect against the set goals - evaluated after a specified number of years.



8. TRAWL-FREE ZONE IN THE BELT SEA



The establishment of a trawl-free zone [In this chapter, “trawl-free zone” also applies to Danish seines and mussel scrapers] in the Belt Sea, covering the Little Belt, Great Belt and Langeland Belt, appeared in the green partial agreement under the Finance Act for 2022, which was entered into by the then government, EL, SF, RV and KD. It appeared from the consultation material for the draft Executive Order on trawl-free zone in the Belt Sea that the Executive Order was expected to enter into force on January 1 2023, but at the same time as the executive order on the trawl-free zone in the Belt Sea was under review, elections were called, and in accordance with the government’s coalition agreement 'Responsibility for Denmark', further work on the trawl-free zone was postponed until further notice. According to the government’s coalition agreement, discussion regarding the industry based on the Fisheries Commission's report, must also include the challenges of a possible trawl ban in the Belt Sea. The Fisheries Commission therefore considers that the considerations and recommendations in this regard should be dealt with in this separate section.




The intention of establishing a trawl-free zone in the Baltic Sea was to create a larger coherent nature-protected area¹. According to the green partial agreement, the trawl-free zone should contribute to "creating a better marine environment, among other things, by promoting gentle fisheries, improving spawning and growing conditions for cod, which will have better opportunities to find shelter in undisturbed and intact bottom habitats, as well as strengthening angling and angling tourism in the area upon the return of the cod to the Balt Sea"².

The Ministry of Food, Agriculture and Fisheries prepared a strategic environmental assessment and a calculation of the financial industry consequences for fisheries in the area in connection with the draft executive order on a trawl-free zone in the Belt Sea. In the strategic environmental assessment it was expected, based on an overall consideration, that fishing restrictions

1 <https://fvm.dk/fiskeri/indsatsomraader/baeredygtigt-fiskeri/trawlfri-zone-i-baelthavet>

2 Delaftale mellem regeringen og Socialistisk Folkeparti, Radikale Venstre, Enhedslisten, Alternativet og Kristendemokraterne om: Investeringer i et fortsat grønnere Danmark (4 December 2021). https://fm.dk/media/25389/delaftale-om-investeringer-i-et-fortsat-groenne-re-danmark_a.pdf



as proposed in the draft of the executive order would contribute to an improved environmental condition in the Baltic Sea.³ During the period (2017-2021) which the Ministry of Food, Agriculture and Fisheries used as the basis for the economic calculations for the industry calculations, there were between 10-30 vessels registered in different types of trawl fishing, including bottom trawl, pelagic trawl, as well as purse seiners and mussel scrapers. The direct negative economic consequences for the industry for the trawl fishery were collectively estimated at up to approx. 5.5 million DKK per year. Out of this approximately 74 percent has consequences for bottom trawl fisheries, 22 percent for clam scrapers and 4 percent for purse seiners, while for fisheries with pelagic trawls the financial industry consequences were minimal. The calculation considered the loss of landing value for the area's active trawlers during the reference period minus saved variable costs which are assumed to amount to approximately 50 percent. This was a 'worst-case scenario', which assumed that the vessels completely ceased fishing⁴ and did not move their fishing to other areas. The foreign fishing that may occur in the Belt Sea is very limited, as foreign vessels only have access to fish up to 3 nautical miles from the coast.

The Fisheries Commission's considerations on trawl-free areas in the Belt Sea are elaborated below.

8.1 Considerations when establishing trawl restrictions in the Belt Sea

The Fisheries Commission considers that the poor environmental condition in the Baltic Sea is largely linked to the pressure factors 1) nutrient load from agriculture, 2) fishing with bottom-dragging gear and 3) climate change. Furthermore, 4) predation from top predators such as cormorants and seals are a direct pressure factor in relation to the fish populations in this area as well. The effects of introducing trawl restrictions in the area in relation to achieving a better environmental condition on the seabed and a restoration of the cod population are therefore associated with a considerable degree of uncertainty. It should also be noted that the area naturally has a low biodiversity characteristic of brackish waters. This section briefly describes the specific pressure factors in the area, while a full description of the impact of fisheries on the marine environment can be found in section 4.3.1 and a description of general pressure factors on the marine environment with significance for the effects of any trawl restrictions is described in section 4.3.2. Next, the Fisheries Commission's considerations on the uncertainty about the effects associated with introducing trawl restrictions in the area are elaborated.

Pressure factors for the state of the environment and fish stocks in the Belt Sea.

The Fisheries Commission considers that the poor environmental condition in the Belt Sea, in particular the poor bottom conditions, is primarily due to frequent, widespread oxygen depletion

³ FVM (2022) Strategisk Miljøvurdering (SVM) Miljørapport for udkast til bekendtgørelse om trawlfri zone i Bælthavet

⁴ FVM (2022) Assessment of erhvervsøkonomiske konsekvenser: Bilag 4 - Erhvervsøkonomisk konsekvensvurdering.docx.pdf (windows.net)

caused by nutrient emissions from agriculture⁵ and other sources such as aquaculture and wastewater treatment plant overflows. Oxygen depletion is particularly frequent in the deeper parts of the Belt Sea, but also affects the lower lying areas. In the belts where the speed of currents is high, oxygen depletion is less common. The nutrient load causes poor oxygen conditions in the seabed and in the water above. If the same water area is affected by repeated oxygen depletion, the fish will disappear for a shorter or longer time, and especially many of the resident bottom-dwelling animals, such as mussels, arthropods, snails and starfish, will find it difficult to establish a natural and varied animal community. It has great significance for production and food webs and for the local biodiversity in the area if the bottom-dwelling animals disappear from the relevant sea area. Oxygen depletion will also have a negative impact on the ability of cod and other bottom-dwelling fish to search for food and eat in the area.

In addition to nutrient loads, the Belt Sea is heavily affected by climate change. The climate changes cause increased water temperatures in the area. The cod in the Belt Sea live close to their upper temperature limit and further temperature increases will therefore have a negative effect on the cod population. The temperature increases are greatest in low-water coastal waters, where adult cod are excluded from previously productive habitats in the future. Finally, an increase in temperature can also affect the cod's food base. Climate change means that the frequency and size of the inflow of salt water from the Skagerrak may decrease, at the same time as the amount of precipitation over the Baltic Sea basin increases. These two climate-driven processes both reduce the inflow of new oxygenated seawater from the Skagerrak and change the ocean currents responsible for the spread of cod eggs and larvae from spawning to nursery areas⁶.

Climate change is expected to exacerbate the effects of nutrient emissions and increase the spatial and temporal spread of oxygen depletion in the Belt Sea.

Fishing with demersal gear in the Belt Sea has a direct physical impact on the seabed, the quantity and diversity of bottom-dwelling animals and on the chemical processes that

5 https://mim.dk/media/216798/arbejdsprogram_for_vp3.pdf

6 Rindorf et al (2023), Fiskeriets påvirkning af økosystemet og økosystemets påvirkning af fiskeriet

take place on the seabed (cf. section 5.3.1)⁷. All other things being equal, the first trawl passage will lead to increased mortality of the organisms on the seabed. In an area that has been trawled regularly for several years, the mortality of the seabed organisms in connection with another trawl passage will be limited. The most vulnerable of the seabed habitats are already damaged by a single fishing episode, while other habitats are naturally more robust to fishing or recover faster after a fishing impact. In the Belt Sea, the most vulnerable habitats are eelgrass in lower water, as well as stone reefs and blue mussel reefs, which occur in patches at all depths.

It is important to note that in the Baltic Sea ⁸ it has for example been shown that the effect of trawling is small or undetectable in the areas that are exposed to oxygen depletion, and that a trawl ban will therefore probably only have a documented positive effect on the benthic fauna in areas that are not negatively affected by oxygen depletion. Nevertheless, fishing with bottom dragging gear can contribute to further deterioration of oxygen conditions, as bottom dragging gear swirl bottom material from the seabed, resulting in increased decomposition of organic bottom material and a decrease in oxygen content in the water. An increased breakdown of organic substances will simultaneously release nutrients into the water column, which - especially in spring and summer - can lead to increased algae production, which can reduce light penetration and further affect the oxygen conditions on the seabed⁹. A recent article by Corell et al. also shows that bottom material that is suspended after a bottom trawling episode can stick to fish eggs and thereby cause them to sink to the bottom. This mechanism can affect the reproductive success of cod¹⁰.

The catch of most fish species in the Belt Sea is regulated using the quota system, which means that the total catches will initially be independent of any trawl restrictions. The direct effect of trawl restrictions on the fish stocks in the Belt Sea will therefore primarily be related to possible improvements in the bottom conditions, including increased amounts of bottom-dwelling prey, as well as a reduction in unwanted catches of young fish by e.g. cod, which in the long term can contribute to increased recruitment to the adult stock. This effect must however be compared with the other pressures on the survival of juvenile fish, such as the predation from cormorants, seals and porpoises, which are expected to be significant in the Belt Sea.

A change in fishing from bottom-dragging gear to for example gill nets are also expected to increase the size and value of the fish landed. As the quotas are based on the weight of the catches, an increase in the weight of the individual fish will lead to a reduction in the number of fish caught, which can have a positive effect on the stock development.

A change in fishing in the Belt Sea from bottom-dragged to passive gear will reduce the above effects of bottom-dragged gear. There are however a number of challenges to this change, which must be resolved to ensure that Danish quotas can be caught and that this is done without new or increased negative impacts on the marine environment.

7 Hansen, J.L.S. & Blomqvist, M. (2018) Effekt af bundtrawling på bundfauna-samfund i Kattegat - undersøgt med forskellige bundfauna-indeks baseret på NOVANA overvågningsdata. Aarhus University, DCE – National Centre for Environment and Energy, 46 p. - Scientific report from DCE - National Centre for Environment and Energy no. 256

8 van Denderen P.D., et al (2022) Effects of bottom trawling and hypoxia on benthic invertebrate communities. *Mar Ecol Prog Ser* 694:13 -27

9 Gislason et al (2021) Miljøskånsomhed og økologisk bæredygtighed i dansk fiskeri. DTU Aqua report no. 392-2021. Department of Aquatic Resources, Technical University of Denmark.

10 Corell, H. et al (2023) Sediment suspended by bottom trawling can reduce reproductive success in a broadcast spawning fish



Seals and cormorants are important predators of cod and pose a challenge to cod fishing with gill nets and pots in the Belt Sea. In the Baltic Sea area, grey seals have had significant direct interactions with the fishing industry. The conflicts between seals and fisheries manifest themselves in several ways, including competition for adult fish from the seals, damaged catches, damaged equipment, forced changes in fishing practices and reduced value of the catch due to parasites. Cormorants pose a major challenge in the area due to the removal of juvenile fish, including cod, flatfish and eel. Fishermen who fish with passive gear such as gill nets, pots and fyke nets, find to a great extent that their fishing is affected by cormorants, as the cormorant takes and/or damages the caught fish before the gear is retrieved. It has been argued that in areas such as the Limfjord, where fish stocks have been or continue to be at their lowest, the presence of cormorants is a contributing factor to why some fish species' stocks are not being rebuilt despite an improved aquatic environment and an increased supply of food for the fish. It should therefore be considered whether the same applies in the Baltic Sea area and whether it may be a contributing factor to the poor stock situation for cod in the Baltic Sea.

The Fisheries Commission's considerations on the uncertainty associated with introducing trawl boundaries in the Belt Sea

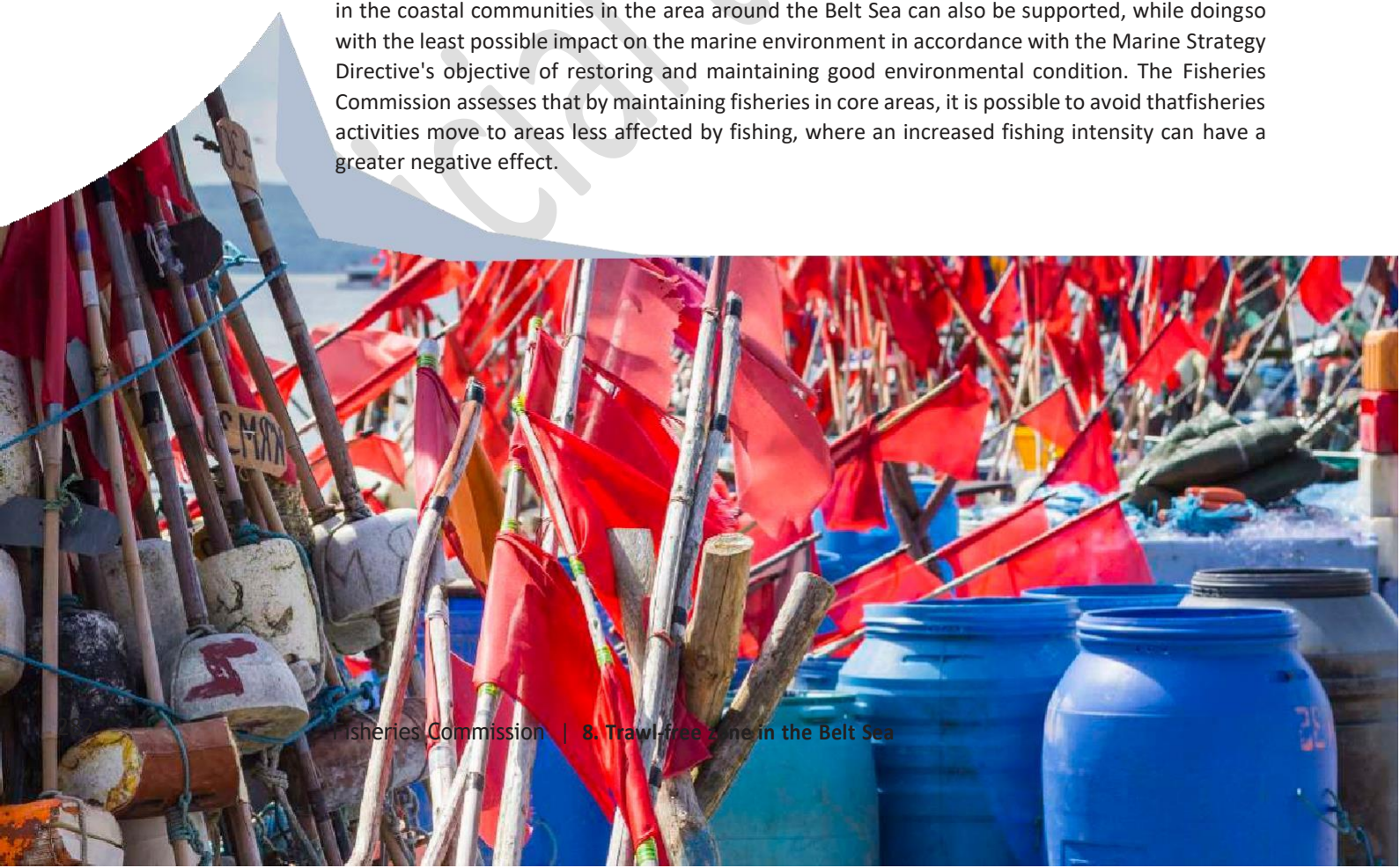
The Belt Sea is in poor environmental condition primarily as a result of frequent oxygen depletion. The above pressure factors all have an influence on the condition, but the primary reason for the poor condition can be attributed to the discharge of nutrients from agriculture. As described above, the effect from fishing with mobile fishing gear with bottom contact is small or not detectable in areas that are heavily affected by oxygen depletion. This means that there is great uncertainty about the implications of a general trawl ban for the environmental condition of the seabed in those areas where oxygen depletion is frequent. The Fisheries Commission therefore stresses that if the purpose of introducing a trawl ban in the Belt Sea is to improve the environmental condition of the seabed in the area, it will require measures that target the causes of the poor oxygen conditions in the area. This means that when/if restrictions are introduced in relation to fishing with mobile fishing gear with bottom contact, there must also be a considerable reduction in nutrient emissions from agriculture in order to achieve the full environmental impact of the intervention. Nevertheless, the Fisheries Commission believes that it is necessary to take action where it is possible both in the short and in the long term to remedy the poor environmental condition in the area, and the Commission considers that trawl-free areas can be a concrete instrument that can support this.

8.2 Recommendation on trawl-free zone in the Belt Sea

The Fisheries Commission stresses the importance of defining a clear purpose for a possible gear restriction in selected areas. The purpose is significant in relation to the success of the initiative and monitoring the effect thereof. As described in the above section, there is considerable uncertainty associated with what effects a general trawl ban will have on the environmental state of the Belt Sea. The Fisheries Commission points out that if the purpose of a trawl-free zone in the Belt Sea is to improve the environmental state, it will most likely be possible to achieve a greater environmental return by introducing a trawl ban in areas with a better environmental state, and where fishing with mobile fishing gear with bottom contact is the biggest pressure factor in relation to the environmental state. Therefore, the Fisheries Commission also emphasizes the importance of a potential trawl-free area in the Baltic Sea not being included in the EU's 30% area protection target at sea. The Fisheries Commission believes that it is necessary to take action where possible to remedy the poor environmental condition in the Belt Sea. The Fisheries Commission assesses that trawl-free areas can be a concrete means of action which can support this and therefore recommends that restrictions be introduced in relation to the use of bottom-dragged gear in the Belt Sea to support two purposes:

- a) Cod stock growth
- b) Sustain life in the coastal communities in the area around the Belt Sea while doing so with the least possible impact on the marine environment.

The Fisheries Commission supports a trawl-free zone in the Belt Sea but recommends allowing fishing with demersal towed gear in some of the fishing's core areas. These must not exceed 10% of the area cumulated over 6 years. The location of the core areas (i.e. where fishing is most efficient and profitable) must be designated in cooperation with the fishermen after advice on the environmental effects. By maintaining fisheries in limited core areas, the objective of supporting life in the coastal communities in the area around the Belt Sea can also be supported, while doing so with the least possible impact on the marine environment in accordance with the Marine Strategy Directive's objective of restoring and maintaining good environmental condition. The Fisheries Commission assesses that by maintaining fisheries in core areas, it is possible to avoid that fisheries activities move to areas less affected by fishing, where an increased fishing intensity can have a greater negative effect.





The Fisheries Commission also recommends, in relation to the concrete design of a trawl-free Zone in the Belt Sea:

- That all fishing in the Belt Sea must be fully documented.
- That specific requirements be introduced for the use of bottom-dragged gear with minimal impact on the seabed and risk of bycatch.
- Fishing in the core areas be limited to vessels that meet the requirements for the Coastal Fishing Scheme, but the vessels do not need to be registered with the Coastal Fishing Scheme.
- That it is considered whether fishing should be limited to vessels native to the area in order to support the local communities.
- That the introduction of these restrictions also supports fisheries that want to change to more gentle fishing gear.
- A regulation of area impact from mussel fishing, which at all times follows the strictest regulation in the Natura 2000 areas and with a focus on reducing the area impact, especially in the areas where the correct growth conditions for eelgrass and macroalgae respectively are present.
- That management measures are implemented which reduce the negative effects of oxygen depletion in the water column and on the seabed.

The measure should be supplemented with monitoring of effects on cod stocks and other fish, as well as socio-economic effects. There should also be a parallel study of the extent to which the measure can help restore habitats, eelgrass and vegetation on rocks and other bottom mechanisms. It should according to the measure takes into account the fact that the Belt Sea is one of the areas where there are the most problems with porpoise bycatch. A conversion to, and use of, gill nets must therefore be made with regard to this.

it should also be noted that in its considerations on a trawl-free zone, the Fisheries Commission has also formulated two alternative models (a 100% closure and a 0% closure for trawl-fishing, respectively), but has concluded that the above-mentioned solution is preferred. In conclusion, it should also be mentioned that it is the Fisheries Commission's assessment that there are other Danish sea areas which will benefit from a greater positive effect from the introduction of trawl-free zones, if one only looks at the improvement of the marine environment's ecosystems and commercial stocks.