Specific management conditions for plaice (*Pleuronectes platessa*) and hake (Merluccius merluccius) in subdivision 20.3.a.20 (Skagerrak) and 27.4.b (North Sea) with Danish seine and gillnet

The project-specific management conditions have been worked out from suggestions of the online expert meeting on 18th May 2022.

1. Expert meeting

1.1 *Besides the general regulations for sustainable fishery listed in Part B, project-specific management conditions are imposed on each fishery project. Taken together with the regulations under B. 2.-4., these special conditions constitute a catalogue of measures to be adopted in the management plan and quality assurance system of the project. The conditions are the result of an expert survey of each fishery project to be performed. Naturland decides whether to accept the list of experts proposed either by the fishery project or a third party and can, where justified, reject the list or ask for changes to be made. The experts on the list should cover the following fields:*

- *scientific institutions which deal with the respective type of fishery (primarily for current in-formation on the status of the stock and on the aquatic ecosystem)*
- *fishing authorities (legal requirements, national and international development aims)*
- *NGOs (social and ecological aspects)*
- *organisations from the fishing and/or processing industries (technical, social and economic aspects).*

1.2 *To ensure that the regulations compiled in the project-specific management conditions are kept up to date, each expert survey is performed every two years at the minimum. In principle, the fishery project bears responsibility for the expert survey being performed ac-cording to schedule. This also holds true for the case that the project has to supply the experts with pertinent data for them to be able to assess the situation of a fishery. The project-specific management conditions for each individual fishery project must be approved by Naturland.*

source: Naturland Standards for Sustainable Capture Fishery; Part B

The following topics include the project specific management conditions:

1.2. The next expert survey should take place latest in 2026. These topics should be discussed in particular:

The distinction in the ICES evaluations between the two different cod stocks occuring in the North sea.

2. Ecology

2.1 The project performs its fishing activities in such a way that integrity of the ecosystem is maintained long-term, concerning both the stocks of the economically relevant species as well as the other components of the ecosystem.

2.2 Subject of the evaluation is the geographical catchment area of the respective fishery project or the project's share in the total exploitation of a certain species.

2.3 In the case of species which only occur temporarily in the catchment area of the project, or which do not spend their whole life cycle there, an evaluation is made of whether the management form of the project were compatible with maintaining the total stock volume if this management form were adopted by all the enterprises involved in fishing this species in this way (exemplary character).

2.4 Even if the fishery project is proven to be managed in an exemplary sustainable manner, Naturland reserves the right not to certify the project, or to defer certification, if the total stock of a species should be critically jeopardized by other factors.

2.5 If no exclusively used geographic area can be attributed to the project (e.g. in deep-sea fishery), the evaluation is made based not only on the fishing practices of the project but also on the total situation of the stocks in question.

2.6 Practices which are generally deemed as detrimental or critical from an ecological point of view are prohibited. These include the following regulations in addition to the project-specific management conditions defined:
- *catching marine mammals and ocean turtles*
- *catching sharks for their fins ("finning")*
- *the use of poisons and explosives in fishing*
- *damage to coral reefs (including cold-water corals)*
- *beam trawl fishing as well as demersal trawling on highly structured sea beds*
- *demersal trawling without suitable escape hatches to keep bycatches to a minimum.*

2.7 The project-specific management conditions govern the following in particular:
- *minimum size and maximum quantities*
- *equipment and techniques employed*
- *close seasons and sanctuaries*
- *avoidance or minimization of bycatches*
- *other measures which help to protect the aquatic ecosystem and/or individual species (e.g. protection of breeding colonies)*
- *protocols for monitoring of relevant pollutants, determination of specific alert/reporting values and threshold values.*

source: Naturland Standards for Sustainable Capture Fishery; Part B

The following topics include project specific management conditions:

2.4. Naturland reserves the right not to perform certification or to suspend the procedure if management of the fishing project is not guided by the concept of the maximum sustainable yield (MSY), i. e. the fishing mortality rate must be below Fmsy ($F<Fmsy$) and the biomass of the fish stock must be greater than or equal to Btrigger ($B \geq Btrigger$). Should no reference

values be available for certain species, then as an alternative certification may be performed on the basis of the life span and manner of reproduction.

2.6. The certified fishery of Thorupstrand will only use Danish seine and gillnets for cod, plaice and hake.

a) The fishery is certified according to the Danish state`s Naturskånsom Program.

2.7

a) The restrictions on the quotas for each member country are annually defined by the European Union[1].

b) The fishery is carried out exclusively with gillnets and Danish seine. The mesh sizes are above the legal requirements[2]. The bigger mesh sizes achieve a higher selectivity of the fishery.
- 120 mm in Danish seine cod-end,
- 105 mm in Danish seine when it is supplied with 125 mm Bacoma panel
- 140 – 180 mm in gillnet for plaice
- 140 – 190 mm in gillnet fishery for cod

The dimensions and type of gillnets are in line with government regulations.

c) The fuel consumption of a Thorupstrand fishing vessel is about 0,3 L fuel per kg for gillnet fishery and 0,2 L / kg for Danish seine. The calculated values include fuel consumption for the whole fishing trip. The vessels have a maximum length of 15 meters, and a average engine power of 150-250 HP, with a single boat up to 300 HP.

d) The Danish seine is only carried out over sandy seafloor. Fishing activities are not taking place in Natura 2000 areas and reef protection zones. Gillnets fishery has relatively few adverse impacts upon the seabed due to the fact that gillnets are not towed over the sea floor.

e) Bycatch on endangered species (Red List of IUCN / ETP - endangered, threatened, protected species) as well as non-quota fish species must be documented. Due to the nature of the fishery (day fishery), the average stay of the gillnets is maximum eight hours, therefore the probability of cetacean bycatch is rather to be low compared to gillnets staying for a longer period. All possible bycatches of harbour porpoises will be documented by the fishermen.

f) Every boat is equipped with waste bins and the fishermen have committed themselves to collect and avoid waste. Bins are also placed at the landing side for collecting waste and especially sea litter.

g) The fishermen are obliged to carefully reset the bycatch alive and undamaged.

h) There is a strong focus to kill the fish directly after being brought on board. The fish is then gutted and put on ice as fast as possible.

i) Scientists and observers have the permission to accompany the fishing vessels for research purposes.

j) Protocol for the monitoring of relevant environmental pollutants in the final product (fresh fish) are shown in table I

[1] For 2020 the quota for plaice fin Denmark was defined at 13.231 t in Skagerrak, whereas Thorupstrand owns 0,717 t in Skagerrak.

[2] EU Standard for mesh size in Danish seine cod end is 90 mm, 100 mm in gillnet (plaice), 120 mm gillnet (cod).

k) Protocol for the monitoring of relevant environmental pollutants in the final product (fresh fish) are shown in table I

Table I

Product

Please indicate to your Naturland contact person if other methods have been used.				
Year of sampling:		**Naturland**		
Parameter	**Interval**	**Alarm value**	**Limit value**	**Limit of detection**
Example	*annually*	*xx mg/kg*	*xx mg/kg*	*xx mg/kg*
Heavy metals:				
Total Arsenic (As)	annually	0,5 mg/kg	1 mg/kg	-
Cadmium (Cd)	annually	0,025 mg/kg	0,05 mg/kg	0,005 mg/kg
Lead (Pb)	annually	0,15 mg/kg	0,3 mg/kg	0,01 mg/kg
Mercury (Hg)	annually	0,25 mg/kg	0,5 mg/kg	0,01 mg/kg
Dioxins:				
Sum of dioxins (WHO-PCDD/F-TEQ)	annually	1,75 pg/g	3,5 pg/g	0,5 pg/g
Sum of dioxins & dioxin like PCBS (WHO PCDD/F-PCB/TEQ)	annually	3,25 pg/g	6,5 pg/g	0,5 pg/g
Sum of PCB28, PCB52, PCB101, PCB138, PCB 153 and PCB 180	annually	37,25 ng/g	75 ng/g	-
Microbiology:				
Total bacterial count	annually	$5x10^6$ CFU/g	10×10^6 CFU/g	$< 10^2$ CFU/g
Listeria monocytogenes	annually	-	detected in 25 g	-
Salmonella	annually	-	detected in 25 g	-
Other:				
Radiation	annually	50 Bq/kg	100 Bq/kg	3 Bq/kg
Histamine	annually	100 mg/kg	200 mg/kg	5 mg/kg
TBT	annually	0,01 mg/kg	0,01 mg/kg	0,01 mg/kg
Please add any further testing parameters below, such as regionally important				

3. Social and economic sustainability of the fishery

3.1 *Naturland's standards governing social responsibility apply (ref. A.III. of these standards).*
3.2 *In addition, allowances have to be made for the situation of many fishermen in the developing countries. Fishery projects (resp. the processors or exporters of the fishery produce) bears responsibility not only for the fishermen to meet with fair working conditions (ref. A. III), but also for adequate living conditions out of working hours. Depending on socio-economic circum-stances, those responsible must introduce the requisite measures in a suitable manner. These include especially:*
- *adequate board and lodging*
- *access to banking and insurance services*
- *health care*
- *schooling for the children*
- *transport possibilities*

This is especially applicable if the fishermen and -women are not capable of fulfilling these basic needs from the sale of their products. This is the case, for example, when there is a glut or where seasonal yields fluctuate dramatically, and in cases of over-dependence on fishing as the sole source of income.
3.3 *The project-specific management conditions govern, in particular:*
- *special social aspects, particularly in relation to the situation in developing countries*
- *measures designed to avoid conflicts with other users of the resources*

source: Naturland Standards for Sustainable Capture Fishery; Part B

The following topics include project specific management conditions:

3.3.

a) All fishermen member of the Thorupstrand fishery Guild share equal ownership to the fishing rights of the community and collectively own all the fishing related facilities.

b) When a boat is operated by three fishers, the total income is divided in five shares of equal size. This is called share-fishing and means, that each fisherman gets 20%, the boat gets 20% and the gear get 20% of the total income. Some boats are owned by one, others by a couple of the crew members. The vessel owners receive and administrate the 20 % share that goes to maintain the boat. The gear may be owned by the boat-owners or by all crew members, who receive and administrate the 20% share of the total income that goes to maintain the gear.

c) The people who work with sorting and packing the fish onshore share 6 % of the total trade, which they send to the auction on behalf of all fishermen.

d) The time frame from the caught fish to the frozen product takes no longer than 30 hours.

e) All the fishermen, which have a responsible function regarding the Naturskånsom certification on each fishing vessel, are in accordance with the rules of the Danish state's certification scheme regularly trained by the Naturskånsom teaching program regarding the quality of the working process, hygiene, waste, discard, good practices and habits.

4. Legal framework and management

4.1 *Fishing is performed in compliance with national and international law. The fishery project has to be able to produce the corresponding documents and proof in full and freshly updated.*
4.2 *The fishery project (or the processor or exporter of the fishing produce) is responsible for its staff and workers being familiar with the contents of these standards. Appropriate training sessions and material have to be provided to guarantee that the catalogue of measures is complied with.*
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4.3 *The management of the fishery project must be able to prove that the requirements laid down in the standards and the project-specific management conditions are implemented systematically, effectively and promptly at every level. This proof includes:*
• consistent records and analysis of the catch data
• feedback between the current catch data and the fishing practice in place
• knowledge of current national and international regulations and fulfilment of the duties arising therefrom
• establishment of mechanisms guaranteeing regular communication between the project and the fishermen with regard to social matters
• existence of and compliance with a development plan (e.g. for deficient issues)

4.4 *The project-specific management conditions govern in particular:*
• obligatory documentation requirements and internal control system.

source: Naturland Standards for Sustainable Capture Fishery; Part B

The following topics include project specific management conditions:

4.2. The head of the Throupstrand Guild confirms with his signature that he will comply with the Specific Guidelines listed here and agrees to the notified or unannounced check by a control body.

4.4.

a) The catch quota of each boat is registered each day, so that it can be controlled how much of the quota the guild members catch each day. The manager of the Guild has the internal competence to stop fishing when the Guild's quota is reached. Additionally, he is responsible for the catch data which is sent to the ministry's management department.

b) The fish can be traced back to the vessel by time and catch area.

c) Non-compliance to the Thorupstrand fishery codes will be sanctioned individually by the management board of the Guild. The management board is elected for three years and consists of seven Guild members.

Appendix:

ICES advice 2021 for plaice:

Plaice (*Pleuronectes platessa*) in Subarea 4 (North Sea) and Subdivision 20 (Skagerrak)

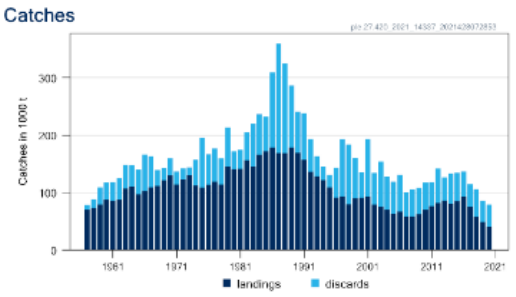
ICES advice on fishing opportunities

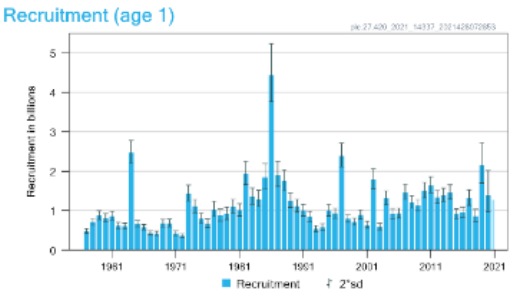
ICES advises that when the MSY approach is applied, catches in 2022 should be no more than 142 508 tonnes.

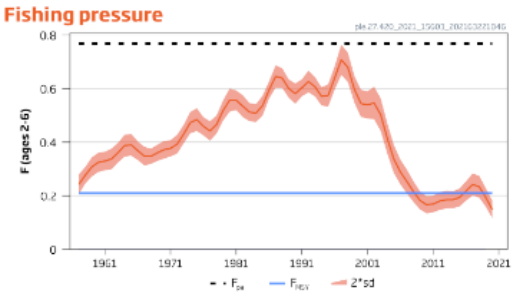
ICES notes the existence of a precautionary management plan, developed and adopted by one of the relevant management authorities for this stock.

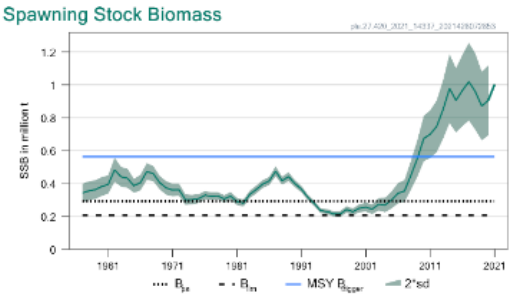
Stock development over time

Fishing pressure on the stock is below F_{MSY}, F_{pa}, and F_{lim}, and spawning-stock size is above MSY $B_{trigger}$, B_{pa}, and, B_{lim}.









ICES advice 2021 for hake:

Hake (*Merluccius merluccius*) in subareas 4, 6, and 7, and in divisions 3.a, 8.a–b, and 8.d, Northern stock (Greater North Sea, Celtic Seas, and the northern Bay of Biscay)

ICES advice on fishing opportunities

ICES advises that when the MSY approach is applied, catches in 2022 should be no more than 75 052 tonnes.

ICES notes the existence of a precautionary management plan developed and adopted by one of the relevant management authorities for this stock.

Stock development over time

Fishing pressure on the stock is at F_{MSY} and spawning-stock size is above MSY $B_{trigger}$, B_{pa}, and B_{lim}.

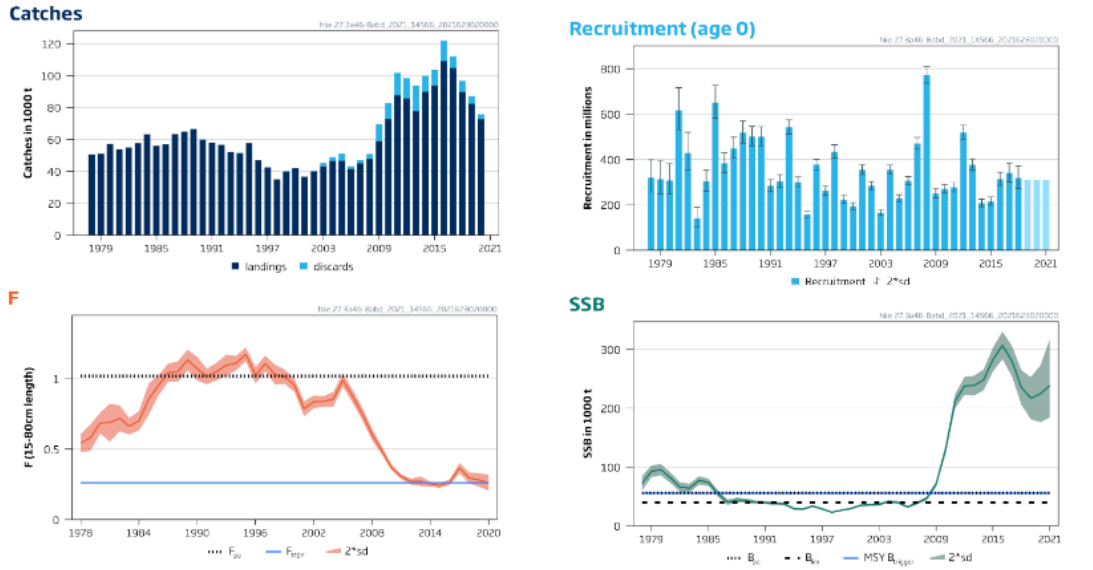


Figure 1 Hake in subareas 4, 6, and 7, and in divisions 3.a, 8.a–b, and 8.d, Northern stock. Summary of the stock assessment. Discard estimates are available since 2003. Assumed recruitment values are shaded in a lighter colour.

Cod is currently not certified by Naturland, as the stock is below MSY.

Map of Danish Natura 2000 areas (purple) in Skagerrak, Kattegat and Eastern Part of the of North Sea: