MEETING DOCUMENT

**Task Group Management (TG-M 20-2)**

14 May 2020

Virtual meeting

**Agenda Item: 7. Sustainable fisheries**

**Subject: Fisheries inventory and working approach Wadden Sea**

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**Submitted by: CWSS**

At the Wadden Sea Board (WSB) meeting 30 held on 21 November 2019 in Wilhelmshaven, Germany, the Board instructed TG-M to come forward with a proposal how to handle the issue of sustainable fisheries.

Following this instruction, TG-M agreed at their TG-M 20-2 meeting in March 2020 on a working approach for the topic Sustainable Fishery (Annex 1). This working approach includes an update of an inventory on sustainable fishery in the Wadden Sea Conservation Area, as well as an overview of the current situation/practices of sustainable fisheries based on the “Framework for sustainable fisheries” (Annex 3 [Tønder Declaration](https://www.waddensea-worldheritage.org/sites/default/files/2014_toender%20declaration.pdf)).

In addition, this topic has been selected as key topic for the Single Integrated Management Plan (SIMP) for the Wadden Sea World Heritage property at WSB 30. Therefore, material will serve as basis for the SIMP reverential structure, which was agreed in the joint SIMP Meeting TG-M & TG-WH on 24 January 2020.

This document contains an inventory on fisheries in the Wadden Sea Conservation Area as updated and commented by TG-M, which may serve as input for the SIMP heading inventory. It also contains a first draft on a trilateral common ground of the topic by CWSS, as well as a first draft of the current situation/practices of sustainable fisheries based on the “Framework for sustainable fisheries” by CWSS commented by Schleswig-Holstein (Annex 2).

Further, this document contains a) and a Danish note on the political decision regarding the annulment of the possibility of re-opening the cockle-/mussel fishery in the Danish Wadden Sea (Annex 3).

**Proposal:** The group is invited to revise the inventory, discuss the level of detail required and next steps.

# Sustainable fisheries in the Wadden Sea Conservation Area

## Background

In their “Framework for sustainable fisheries” adopted as Annex 3 Tønder Declaration at the Trilateral Governmental Conference 2014 in Tønder, Denmark, it is stated that “*Fishery activities should not significantly impact the integrity and function of the ecosystem, i.e. not deteriorate the natural habitats and species in the Wadden Sea and not impair the sustainability of fish stock. Fishing activities in the Wadden Sea Conservation Area should be carried out in accordance with the Guiding Principle*”. In the same Annex, the Wadden Sea Board (WSB) identified a catalogue of principles, which require special attention for the implementation of sustainable fisheries.

At their TG-M 20-1 meeting in March 2020, TG-M agreed on a proposal on how to handle the issue of sustainable fisheries (Annex 1).

In the following, a short draft inventory on fishery in the Wadden Sea Cooperation Area is given, based on the Thematic report on fisheries (Baer et al. 2017) and an inventory by the Task Group Management (TG-M) at their 13th meeting in 2015, which was updated by TG-M members with information until the year 2019 (Tables 1 – 4). This Inventory and Common ground may serve as input to the Single Integrated Management Plan (SIMP) and its online version, as well as for the current status and recommendation for each of the principles for sustainable fisheries (Annex 2).

## Draft Fisheries Inventory for the Wadden Sea Cooperation Area

Commercial fisheries in and adjacent to the Wadden Sea concentrate on brown shrimps (*Crangon crangon*) and mussels (predominantly blue mussels *Mytilus edulis*), while small-scale fisheries include cockles (*Cerastoderma edule*) (Baer et al. 2017) (Table 1).

Blue mussels are usually cultivated in on-bottom culture plots. Spat is collected from wild mussel seed. Blue mussels are cultivated and harvested in Germany and the Netherlands, while the Danish Wadden Sea Area is permanently closed for such activities, as recently underlined (Annex 3).

Data on brown shrimp fishery are usually given for the entire North Sea region, as this resembles the brown shrimp population (Table 2). In 2017, shrimp fishery in the Wadden Sea has been certified by the Marine Stewardship Council (MSC) Sustainable Fisheries ([Addison et al 2017](https://www.msc.org/docs/librariesprovider8/de/zertifizierung-nordseekrabben/20171103-nsbs-pcr-final.pdf)) which also implies new developments and information for the Wadden Sea Conservation Area, including a Brown Shrimp Management Plan. The Unit of Certification for the MSC covers Dutch, German and Danish vessels catching brown shrimp in the North Sea by use of lightweight beam trawls. Recently, the first MSC surveillance report has been submitted ([Addison et al 2019](https://fisheries.msc.org/en/fisheries/north-sea-brown-shrimp/@@assessments)), which includes an updated version of the Brown Shrimp Management Plan.

Also, non-commercial fishing takes place in the Wadden Sea (Table 3).

Fishing activities in the Wadden Sea effect the ecosystem beyond target species.

The trilateral basis for sustainable fishery in the Wadden Sea is laid down in the principles of the Framework “Framework for sustainable fisheries” (Annex 3 of theTønder Declaration).

*Table 1. Shellfish fishing in the Wadden Sea Conservation Area 2020 (source QSR 2009, updated)(Table content: Baer et al. 2017, footnotes added), updated by TG-M 2020-05).*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Netherlands** | **Lower Saxony** | **Schleswig-Holstein** | **Denmark** |
| **Blue mussel fishery** | | | | |
| Average annual Mussel landings 2015-2019 (t)  SH: 2015 – 2019  NL: 2009 - 2019  2009-2019 (t) | Wadden Sea 20 514 t | 3 086 tot | 14.800 t | 0 t |
| Oosterschelde 24 685 t | (from culture lots) | (from culture lots) |
| (from culture lots) |  |  |
| Mussel culture in use (ha) | 3 500 | 1 300 (maximum area; actual [2020] only one quarter in use due to lack of seed mussels) | 1 450 ha (+ 250 ha for seed collectors) | None |
|
| Number of Licenses\* | 89 (seed fishing vessels) | 5 (vessels) | max. 8 licences  (8 fishing vessels, 1 working vessel for seed collectors, 3 boats for controls ect.) | None |
| 82 mussel culture |
| Quota | For seed mussels | None | None |  |
| Permanently closed area (ha) | 42 540 | 93 480 | 383 670 (87% of the National Park) | All of Danish Wadden Sea Zone |
| (this area covers 18 % of total intertidal stock) | (this area covers about 10 % of total area of intertidal mussel beds) | (this area covers 100 % of intertidal mussel beds) |
| Additional restrictions | Intertidal: Seed fishery on unstable mussel beds only if at least 2000 ha of 1-year old mussel beds are left. Use of black box system. | Intertidal: Additionally 17 sites closed in accordance with Management Plan (about 10 % of intertidal mussel beds).  No harvesting of mussels outside culture plots  Seasonal closure 15.12.-31.03.  Approval for Seed fishery on unstable mussel beds not granted if a minimum area of 1.000 ha or biomass of 10.000 t is undercut by more than 10%. | Min. size 40 mm, use of black box system, seasonal closure for spat 01.05-30.06 and for harvest mussels 01.04-15.06 | N.a. |
| Subtidal: Min. size 50 mm (wild harvest mussels) |
|  |
| Use of black box system |
|  | | | | |
| **Cockle fishery** | | | | |
| Average annual cockle landings (tons wet weight) | Mechanical: no landings since 2005 | No landings since 1999 | No landings since 1989 | No landings since 2008 except trial fishery in 2016 |
| Non-mechanical: 627 tons of meat average annual harvest 2005 – 2019 |
| Number of licenses/vessels for cockle fishery | Maximum of 31 licenses for manual cockle fishery | None | None | None |
| (all actively used) |
| Permanently closed area (ha) | 42 540 | 100 % of conservation area | 100 % of conservation area | 99 % of conservation area |
| Additional restrictions for cockle fishery | Min. size 15 mm. |  |  | Min. size 16 mm, total landing limit of 2000 t |
| Maximum yearly catch: 2.5 % of the cockle stock |
|  |  |  |  |  |
| ***Spisula* fishery** |  |  |  |  |
| *Spisula* landings, annual average in tons fresh weight (period) | No landings since 2001 | No landings since 1996 | No landings since 1995; no licences since April 2017 (new mussel fishery program) | No landings since 2003 |
|
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|  |  |  |  |  |
| **Oyster fishery** |  |  |  |  |
| Oyster culture | Not practiced | Not practiced | 1 oyster culture lot, minimum size for consuming is 50 gr | Not practiced |
| Oyster collection | hand picking of intertidal pacific oysters is allowed for 18 permit holders. Amount of permit holders is limited to 12. | Not practiced | only hand picking on max. 450 ha intertidal in zone 2 with max. 10 persons at the same time | Not practiced\*\*  Handpicking on individual basis for own consumption allowed. w.o. license  Orhganized handpicking for commercial use can be licensed.\*\*\* |

\* include details to content of licenses? \*\* to be amended? in TG-M 13 (2015) inventory, the following information is given: “*A project with experimental fishing for Gigas oysters has been initiated with one fishing license. Fishing has not started yet. It may only take place in mussel production areas 132 and 135. The quantity is 750 tons”. License expired*

*\*\*\*This will be regulated further in connection with revision of “The Statutory Order on Protection of The Wadden Sea”*

*Table 2. First draft of facts on shrimp fishery in the Wadden Sea (based on Baer et al. 2017 and TG-M 2015).* *Besides national measures, brown shrimp fishery is managed through EU regulations and through the Brown Shrimp Management Plan, which sets out details of the harvest strategy including harvest control rules (HCRs), an ecosystem approach to management of the fishery, and the regulations applying to the fishery.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Netherlands** | **Lower Saxony** | **Schleswig-Holstein** | **Denmark** |
| **Shrimp fishery** | | | | |
| Average annual shrimp landings 2009-2015 (t)\* | Average 93,471 kg (period 2004-2013) | TBD possible for Wadden Sea or North Sea only? | landings of the SH shrimp fishery range annually between 6000 and 6800 tons | ~1.500 t Area west of islands |
| Number of Licenses | 89 licenses for shrimp fishing in the Waddensea | 103 (105) licenses (2020) granted by the BLE (Bundesanstalt für Landwirtschaft und Ernährung) for fisheries on shrimps. | west coast of Schleswig-Holstein 74 commercial shrimp fishing boats. Additional 52 smaller vessels are operated by part time fishermen (Nebenerwerbsfischer) | 32 (To be checked) |
|  |
| Quota | Traditionally no quota (Baer et al 2017), Harvest Control Rules (HCRs) in Brown Shrimp Management Plan | Traditionally no quota (Baer et al 2017), Harvest Control Rules (HCRs) in Brown Shrimp Management Plan. | no quota (Baer et al 2017), Harvest Control Rules (HCRs) in Brown Shrimp Management Plan | None |
| Permanently closed area (ha) | 7.250 ha | 600 ha (ha), some core zones by law of the national park | 12.600 (ha) in zero use area. In southern part of the Nationalpark time based voluntary regulations in the shelduck moulting areas | Entire Danish Wadden Sea area (between mainland and islands) was closed to fishing in 1977 and the regulation is still in force |
| Additional restrictions | On the basis of the agreements as given in the Convenant VISWAD (Nature-NGOs, Government and Shrimp fishery sector) the shrimp fishery sector will apply for the necessary Nature Protection permit. Horizon of the VISWAD is 2026. The ambition for 2020 is to reduce the impact of shrimp fishery with 50%, a.o. by reduction of the fleet by 20-30%, using best-available –techniques, closed areas. |  |  |  |
|  |
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|  |
| \* 32,661 tons in the North Sea in 2019 for MSC fishery (*https://fisheries.msc.org/en/fisheries/north-sea-brown-shrimp)* | | | | |

*Table3. First draft of facts on non-commercial fishing in the Wadden Sea (input TG-M 2015).*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Netherlands** | **Lower Saxony** | **Schleswig-Holstein** | **Denmark** |
| **Non-commercial fishing** | | | | |
|  | For personal use it is allowed to take 10 kg/day of shellfish. | By National park law all kinds of recreational fishing is forbidden in the core zones of the national park. Recreational fishing is allowed without a license in the intermediate and the recreational zone of the national park. This includes the collection of blue mussels and oysters for private use | All persons with a fishing license (which is needed in Schleswig-Holstein e.g. for angling) are allowed, within a general administrative regulation of the Nationalpark Law to collect oysters and blue mussels for private use. This use is restricted to zone 2 and the coastal strip of zone 1. The amount is limited to a maximum of 10 liters per day. | Recreational fishing is allowed in the Danish part of the Wadden Sea when a fishing license has been purchased. NB! No nets and fykes allowed.  Collection of mussels and oisters for personal consumption is allowed without fishing license |

*Table 4: Comprehensive inventory on fishery in the Wadden Sea Conservation Area 2015 (Original text TG-M 2015).*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Denmark** | **Schleswig-Holstein** | **Lower Saxony** | **Netherlands** |
| **Type** | | | | |
| Shrimps (*Crangon crangon*) | (subtidal)  There has been issued 32 licenses for fisheries on horse shrimps. By regulations beam trawl fisheries for shrimp can only take place 3 nautical miles outside the low-water line. South of Skallingen peninsular it is not allowed to fish for shrimps within the Islands.  Due to conservation concerns, the entire inner Danish Wadden Sea area was closed to fishing in 1977 and the regulation is still in force. | Along the west coast of Schleswig-Holstein licenses have been issued for 74 commercial shrimp fishing boats. In addition 52 smaller vessels are operating by part time fishermen (Nebenerwerbsfischer). Most commercial fishing boats are also able to fish on fish. Fishery is allowed within the most parts inside the Nationalpark except in the zero use area, which is marked red in the map. Within the southern part of the Nationalpark there are time based voluntary regulations in the shelduck moulting areas. The landings of the SH shrimp fishery range annually between 6000 and 6800 tons. | There are 103 (105) licenses given by the BLE (Bundesanstalt für Landwirtschaft und Ernährung) for fisheries on shrimps. By the law of the national park it is forbidden to fish shrimps in some core zones (see red zones in fig. 1) | On the basis of the agreements as given in the Convenant VISWAD (Nature-NGO’s, Government and Shrimpfishery sector) the shrimpfishery sector will apply for the necessary Nature Protection permit.  Horizon of the VISWAD is 2026. The ambition for 2020 is to reduce the impact of shrimp fishery with 50%, a.o. by reduction of the fleet by 20-30%, using best-available –techniques, closed areas.  There are 89 licenses for shrimpfishing in the Waddensea. |
| Fishing applying nets | (subtidal)  Within the islands in the Danish part of the Wadden Sea, T  There is a general prohibition on fyke nets, gillnets, re. concluding note. | .there is regulation on gillnets within the whale sanctuary off the west coast of the island of Sylt by fishery Law (Küstenfischereiordnung). |  |  |
| Blue mussels *Mytilus edulis* | Subtidal: There is no blue mussel fishery in the Danish part of the Wadden Sea. | Blue Mussel fishery is regulated by the Fishery Law and the Nationalpark-Law of Schleswig Holstein and based on a mussel-fishery-program. The current program is running since 2071 until the end of 2031.  The basics of the existing regulations are:  Blue mussels (all activities restricted to the subtidal):  •The area of mussel culture lots is restricted to 1 450 ha outside of zone 1, ,  •Additional 250ha of the subtidal (outside zone 1) can be used for mussel seed collectors  •Seed mussel fishery is only permitted in parts of four tidal basins in the subtidal outside of zone 1 ,  •Import of seed mussels is forbidden by highest court judgment. | Blue mussel fishery in Lower Saxony (5 vessels) is regulated by fisheries law and the national park law. The seed-mussel fishery is allowed in the frame of a management plan (actual plan valid 2019-2023), implemented in the National Park law. This plan is a central part of the regulations of the seed mussel fishery. The plan contains:  -29 sites out of a total of 102 intertidal sites are closed for seed mussel fishery (12 closed by law, 17 closed by management plan)  - Approval for seed fishery on unstable mussel beds not granted if a minimum area of 1.000ha and a biomass of 10.000 t is undercut by more than 10%.  -The fishery for consumption mussels on natural mussel beds in the intertidal areas is not allowed.  - import of seed mussels from areas outside specified geographic limitations is not allowed | The Ministry of agriculture, nature and food quality agreed with several NGO’s a ‘mussels covenant’ in 2008. Agreements have been made on improving the sustainability of the mussel fishery sector and strengthen nature recovery in the Wadden Sea. Therefore the fishery sector should realize non-soil-contacting seed mussel fishing, by using artificial seed collector farms (now 8 operational) or by importing from the South-Western Delta.  The covenant aimed to fully end the mussel fishery in the subtidal part by 2020 (100%). This process is going slower than expected. 28% of the subtidal part is now closed for seed fishery. It is expected to increase this to 35.7% by the end of the year. The covenant partners are now trying to reach an agreement on closing the remaining subtidal.  Subtidal. Intertidal under conditions: 28% of the intertidal is closed and a min. of 2000 ha of stable (>1 year old beds) should remain.  Culture lots are licensed.  A total of 7.700 ha is available for fishing. A total of 3.500ha is actually in use  Sector needs twice a year a license, based on actual stock assessments.  93 mussel fishing licenses operational (2012). |
| Common cockles and *Spisula* | (subtidal) A single vessel is allowed to fish common cockles and Spisula. Common cockles can be fished in an area, bordered in the north by latitude 55 ° 36'N and in the south by the Danish German maritime border. However, the fisheries must take place outside the 3 mile limit at depths greater than 6 meters and not between the parallel of latitude of 55 ° 12'N and 55 ° 20'N. Spisula can be fished in an area, bordered to the north by latitude 56 ° 14'1N and south of latitude 55 ° 50'00 N. However, the fisheries must take place outside the 1-mile of the low-water line. | Fishery for other mussels is currently not allowed in the Nationalpark, | There is no cockle fishery or other mussel fishery in the National park in Lower Saxony | Permits for manual cockle fishery were provided via the nature protection law. Permits were continuous appealed. The involved parties reached an agreement offering long term ecological and economic guarantees for all parties involved. The ministry, the province of Friesland and NGO’s agreed in 2011 the following:   * The sector needs continuity and is allowed to harvest cockles in years with a limited number of cockles available (maximum of 2.5%) * The most important bird areas will be permanently closed; * A number of valuable areas for birds will be closed in the years few cockles are present. In other areas there will be limited fishing; * Fishing in these areas is allowed in years with an abundance of cockles while fishery will be spread over the Wadden Sea.   Hand raking for cockle fishery is allowed in the intertidal. Total amount may not exceed 2.5% of total cockle stock.  31 permits are issued.In spring a survey is conducted on stock availablility. An average of 627 ton per year has been caught between 2005 and 2019. |
| Pacific oysters *Crassostrea gigas* | A project with experimental fishing for Gigas oysters has been initiated with one fishing license. Fishing has not started yet. It may only take place in mussel production areas 132 and 135. The quantity is 750 tons. The licence has expired due to no-use | •There is one permit for oyster culture (30ha) east of the island Sylt. New permits will not be granted.  •Collecting seed mussels (for the oyster culture) in the intertidal is permitted in zone 2, restricted to an area of max. 450ha (which is 1% of the intertidal of zone 2). Permission is only for collection by hand with a maximum number of 10 persons per selected area at the same time. Collection is not permitted in areas with a mixture of blue mussels and pacific oysters.  •Collection (by hand) of adult oysters (more than 50g flesh weight) for commercial use is granted in 7 selected areas by a maximum of 7 single licenses. Presently 2 licenses have been given (one of them comprises several selected areas), which totally cover 400 ha. | There is no oyster fishery in the Lower Saxony part of the Wadden Sea (only as a bycatch during the commercial blue mussel fishery). | Fishery on Pacific oyster takes place by manual collection following an agreement reached between the province of Friesland, the manual collectors, nature NGO’s and the ministry of Agriculture, Nature and Food Quality. The fishery is currently in a transition phase with 18 permits. The total number of permits will be limited to a maximum of 12. |
| Non-commercial fishing | sub- an intertidal)  Recreational fishing is allowed in the Danish part of the Wadden Sea when a fishing license has been purchased (Not with fykes/nets though). Collection of mussels and oisters is allowed for personal consumption without fishing license | All persons with a fishing license (which is needed in Schleswig-Holstein e.g. for angling) are allowed, within a general administrative regulation of the Nationalpark Law to collect oysters and blue mussels for private use. This use is restricted to zone 2 and the coastal strip of zone 1. The amount is limited to a maximum of 10 liters per day. This is according to our experience, a rare activity | By National park law all kinds of recreational fishing is forbidden in the core zones of the national park. Recreational fishing is allowed without a license in the intermediate and the recreational zone of the national park. This includes the collection of blue mussels and oysters for private use. | For personal use it is allowed to take 10 kg/day of shellfish. |
| OTHER (Specific regulations,) | Specific regulations for fishery in the Danish part of the Wadden Sea has been laid down in a regulatory announcement: “Specific rules of fishery and conservation areas in the Wadden Sea and in certain streams in South Jutland” |  |  |  |

## Draft Common Ground for Sustainable Fisheries in the Wadden Sea Cooperation Area

Trilateral principles for sustainable fisheries in the Wadden Sea Conservation Area are laid down in the “**Framework for sustainable fisheries**” (Annex 3 Tønder Declaration).

In the **Wadden Sea Plan 2010** it is stated that fishery may affect the natural environment of the Wadden Sea with most important fisheries within the Nature Conservation Area being for blue mussel and shrimp.

Trilateral agreements on policy and management for sustainable fisheries in the Wadden Sea Plan are described under the Targets Tidal Areas (4), Birds (9) and Fish (11):

*4.22 (identical to 9.5) Cockle fishery is not allowed in the Wadden Sea Area, with the exception of mechanical fisheries in some small areas along the Esbjerg shipping lane and in the Ho Bay, and in Niedersachsen outside of the conservation area (but will not be carried out at present), as well as non-mechanical cockle fishing in The Netherlands.*

*4.23 (identical to 9.6) The effects of mussel fishery are limited by the permanent closure of considerable areas and the reservation of sufficient amounts of mussels for birds. In addition, the management of fishery on mussels should not be in conflict with protecting and enhancing the growth of natural mussel beds and* Zostera *fields.*

*4.24 (identical to 9.7) Mussel fishery will, in principle, be limited to designated parts of the subtidal area. Based on national management plans, fishery on the tidal flats and parts of the sub-littoral may be granted. The fishery sector will, in close cooperation with competent authorities, improve existing practices in such a way that impacts of mussel fishery in general and seed mussel fishery in particular, will be minimised.*

*4.25 The current area of mussel culture lots will not be enlarged.*

*4.26 The existing permit for oyster culture in Schleswig-Holstein will remain in force. New permits will not be granted.*

*4.27 (identical to 11.3) In order to reduce bycatch and to reduce impact on the sea floor, trilateral policy principles for a sustainable shrimp fishery will be developed in close cooperation with the fisheries sector.*

These agreements towards sustainable activities in the Wadden Sea are backed up by national management plans and policies in the three countries (Table 5).

*Table 5. Possible layout of overview of laws and main policy documents for fisheries (and other non-water laws which influence implementation of fisheries) which back up trilateral agreements in Denmark, in the three German Federal States and the Netherlands.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Wadden Sea World Heritage property in…** | **Shrimp fishery** | **Mussel fishery** | **?** |
| All | \* |  |  |
| the Netherlands |  |  |  |
| Germany |  |  |  |
| Lower Saxony |  |  |  |
| Hamburg |  |  |  |
| Schleswig-Holstein |  |  |  |
| Denmark |  |  |  |

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## ANNEX 1: Proposal for working approach Fisheries

Proposal how to handle the issue of sustainable fisheries (to be submitted to WSB 31 meeting June 2020)

1. **Update and completion of fishery inventory** **– level of detail TBD**
2. **Status and recommendations for principles Framework Sustainable Fishery**
3. **Recommendations to WSB, e.g., in form of a policy analysis/policy brief**

Product 1: Inventory on fishery in the Wadden Sea Conservation Area.

Product 2: Document on Framework Sustainable Fishery with status quo and recommendations for upcoming Trilateral Governmental conference.

Product 3: Document with policy recommendations to WSB, e.g., policy analysis/policy brief

Both products will feed into the SIMP, starting with inventory and common ground.

## ANNEX 2: Outline for status and recommendations for principles of the Framework Sustainable Fishery: six years after Tønder

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| --- |
| **Appropriate assessment or equivalent impact assessments** *Within the framework of relevant EU legislation (e.g. the Habitats Directive, the Bird Directive, the Marine Strategy Framework Directive and the Water Framework Directive), assessments should be applied to all fisheries sectors in the Wadden Sea. This should be done as an exchange of knowledge and experiences trilaterally in relation to impact assessments, with the aim to secure comparable methods and standards between the trilateral countries. These assessments must be based upon nature conservation objectives, specified to the extent possible, scientifically robust, trilaterally comparative and transparent. The use of regular impact assessments by all Wadden Sea regions would also level the playing field and may facilitate the dialogue between the fishery managers, the industry and environmental NGOs at a trilateral level* |
|

Status: TBD. Note: Dialogue on brown shrimp fishery by Joint Working Group (NGOs, fishery) on-going in course of MSC surveillance.

Recommendation for management action for the upcoming five (?) years: TBD

|  |
| --- |
| **Fishing gear/best practice** *The application of appropriate fishing gear and best practices is another essential element in operationalizing sustainable fisheries, in particular with the aim of reducing impacts on the bottom and reducing bycatch. Best practice is understood to be a combination of fishing techniques and fishing effort, minimising impacts. A detailed analysis of fishing gear (application, site specific impact) may be part of the dialogue with the stakeholders. The fishing industry should be encouraged to develop more sustainable techniques and practices.* |
|

Status: Alternative techniques with potentially less impact to the ecosystem are under development, as well as corresponding national management and protection regimes (Baer et al. 2017). In the course of MSC certification, the mesh size is intended to increase from originally 20 mm to 24 mm according to the Brown Shrimp Management Plan. The [CRANIMPACT](https://www.thuenen.de/en/sf/projects/impact-of-brown-shrimp-fishery-on-benthic-habitats-cranimpact/) project on impacts of shrimp fisheries on habitats and communities in the coastal seas of the Federal States of Schleswig-Holstein, Hamburg and Lower Saxony is on-going (2018 – 2022) (Thünen Institute 2020).

Recommendation for management action for the upcoming five (?) years: TBD

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| **Closed areas** *Closed areas are a management option for sustainable fisheries in the Wadden Sea Conservation Area, in particular to allow natural processes to proceed in an undisturbed way, to achieve the conservation objectives and biodiversity and in cases where there is insufficient knowledge about impacts. Sufficiently large closed areas can also serve as reference and recovery areas. The designation of such areas is in the responsibility of the national state, taking into account the relevant EU regulations.* |
|

Status: Fishery is regulated by EU and national legislation, the latter comprises fishery law as well as nature protection law in the three states. Several areas are closed for shrimp and mussel fishing activities, with different extent over the three countries. Denmark has banned shrimp and mussel fishery entirely (Figure 1) (Baer et al. 2017). Closed areas were, however, not completely avoided by brown shrimp fishery (German vessels, 2007 – 2013) (Kuechly et al. 2016).

Recommendation for management action for the upcoming five (?) years: TBD

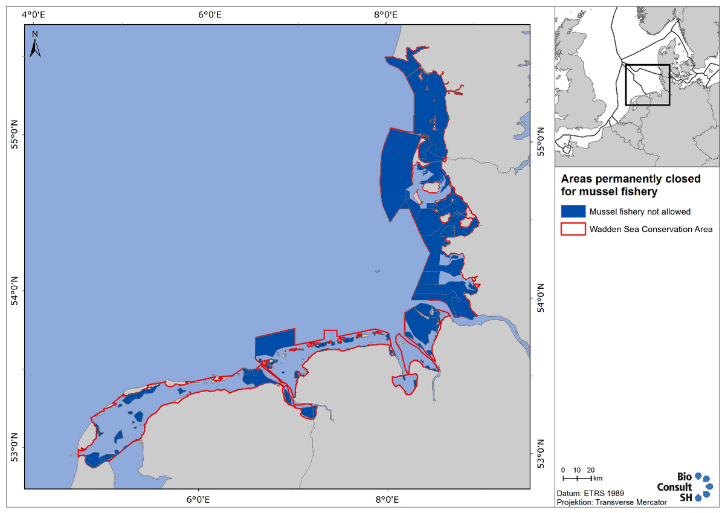
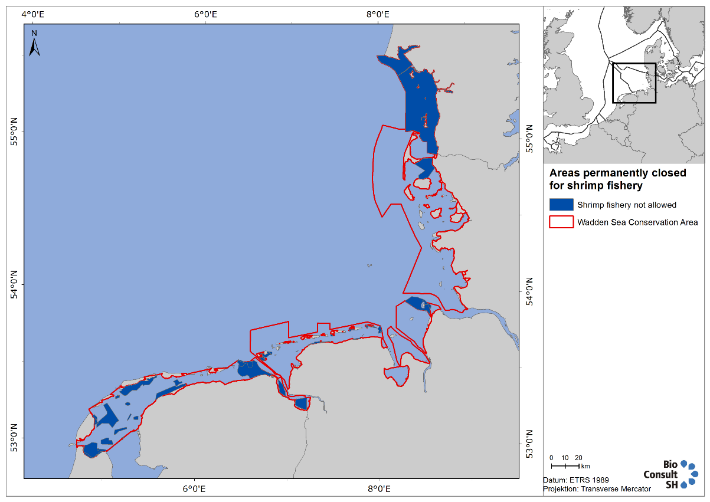


Figure 1: Maps showing Wadden Sea areas closed year-round (dark blue) in Wadden Sea Conservation Area (red line): left: shrimp fishery; right mussel fishery. The map on mussel fishery includes future closed areas in Schleswig-Holstein when the updated management plan comes into effect (Source: figures 4 and 9 of QSR thematic report on fishery).

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| **Monitoring/control/black box** *This includes monitoring of fishing activities and the status of fished and closed areas. The fisheries sector is co-responsible for monitoring of fishing activities. Black boxes, or equivalent systems (e.g. VMS), are an important precondition for co-management, including nature protection.* |
|

Status: TBD

Data from Automatic Identification System (AIS) and the Vessel Monitoring System (VMS) messages show low to very high fishing intensity in the Wadden Sea Cooperation Area (JRC, compare Figure 2). Fishing activity of members (MSC) are monitored through VMS mapping every year to monitor the risk of any expansion into sensitive habitats (vessel Monitoring System (VMS) plots for brown shrimp fishery are provided for the Netherlands, Germany and Denmark within the MSc certification process, compare figure 8 in Addison et al 2019).

Recommendation for management action for the upcoming five (?) years: TBD

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| **Stock assessment** *Regular stock assessments must be carried out to serve as a basis for stock management as clarified in the EU Common Fisheries Policy and other relevant EU legislation. This is an essential element for sustainable fisheries. Fishing impact should be such that stable food webs are restored and maintained, supporting natural populations of predators*. |
|

Status: TBD.

Until 2016 there were no annual stock assessments for brown shrimps in the North Sea, yet there are signs of growth overfishing for this species (Tulp et al 2016). For this short-lived species, a conventional age-based stock assessment is not possible. “*ICES advised that the development of a harvest control rule (HCR) based on a comparison of the most recent commercial landings per unit effort (LPUE) data with pre-defined trigger levels (based on previous LPUE data) was the most appropriate approach for this short-lived species. ICES also advised that Crangon should be taken into account within the framework of ICES advice regarding North Sea mixed fisheries because of the significant bycatch of other species in the small-meshed net Crangon fisheries, and in relation to multispecies interactions because future recovery of gadoid populations could have an impact on shrimp population dynamics”* (Addison et al 2019)*.*

It is unclear, if fishing pressure would reduce shrimp availability to predators (Tulp et al 2016).

Recommendation for management action for the upcoming five (?) years: TBD

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| **Appropriate knowledge<>responsibility of all parties involved** *In the process of operationalizing sustainable fisheries, use must be made of best available knowledge. There is a responsibility of all parties involved in supporting knowledge about the status of the ecosystem.* |
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Status: TBD

Recommendation for management action for the upcoming five (?) years: TBD

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| **Pilot studies (learning by doing)** *Transition towards sustainable fisheries also implies that there must be ample possibilities for testing new methods and practices. Knowledge gained in pilots should be spread among all parties involved* |
|

Status: TBD

Several projects have been and are being conducted. Amongst them is [CRANNET](https://www.thuenen.de/en/institutsuebergreifende-projekte/optimised-brown-shrimp-fishery-crannet/) (Thünen Institute 2020), in which improvement of cod end selectivity (result: cod ends with T0 or T90 meshes and a mesh size of 26 mm or square mesh cod ends (T45) with a mesh size of 24 mm were identified to increase the sustainability of brown shrimp fisheries in terms of ecological and economic aspects) and reduction of by-catches in brown shrimp fishery were in the focus from 2012 – 2015.

Recommendation for management action for the upcoming five (?) years: TBD

## ANNEX 3: Translation of the political decision regarding the annulment of the possibility of re-opening the cockle-/mussel fishery in the Danish Wadden Sea



Ministeren for fødevarer, fiskeri og ligestillings besvarelse af spørgsmål nr. 616 (MOF alm. del) stillet 20. februar 2020 efter ønske fra ikkemedlem af udvalget (MFU) Ulla Tørnæs (V).

**Spørgsmål nr. 616** ”Kan ministeren oplyse, hvilket videnskabeligt faglig grundlag der ligger til grund for, at man ikke vil tillade et fiskeri i Vadehavet efter blåmusling?”

**Svar** Det er regeringens holdning, at vi skal udvikle dansk fiskeri i de områder, hvor det giver mening ud fra både et samfundsmæssigt og natur- og miljømæssigt synspunkt. Vadehavet er et unikt naturområde og er udpeget som Unesco verdensarv, og området forvaltes i et samarbejde med Holland og Tyskland i Det trilaterale Vadehavssamarbejde. I spørgsmålet om, hvorvidt man skal tillade fiskeri efter blåmuslinger i Vadehavet, må der foretages en afvejning mellem hensynet til en mulig erhvervsindtægt ved et fiskeri over for beskyttelsen af et naturområde mod den skade, som et fiskeri efter blåmusling med bundskrabende redskaber vil påføre området.

Regeringen finder, at beskyttelsen af det helt særlige naturområde i Vadehavet skal vægte højere end ønsket om at gennemføre et erhvervsmæssigt fiskeri efter blåmuslinger i området. Vadehavet som naturområde understøtter også mange lokale arbejdspladser gennem tiltrækning af turister til området og regionen.

Mogens Jensen / Nis Christensen

Miljø- og Fødevareudvalget 2019-20

MOF Alm.del - endeligt svar på spørgsmål 616

Offentligt

**Minister for Food, Fisheries and Equal Opportunity Answers Question 616 (MOF General Part)**

**20 February 2020 at the request of non-member of the committee (MFU) Ulla Tørnæs (V).**

**Question 616:** *"Can the Minister state what scientific basis underpins that one would not allow fishing in the Wadden Sea after blue mussel? "*

**Reply** “It is the Government's position that we should develop Danish fishing in the areas where it makes sense both from a societal and natural as well as an environmental point of view.

The Wadden Sea is a unique natural area and is designated as a UNESCO World Heritage Site, and the area is managed in cooperation with the Netherlands and Germany in the trilateral Wadden Sea cooperation.

Regarding the question of whether to allow fishing for blue mussels in the Wadden Sea, it is necessary to balance the consideration of a possible commercial income from fishing against the protection of a nature area against the damage that a fishing for blue mussel with bottom scraping gear will inflict the area.

The government believes that the weight of protection of the very special nature area in the Wadden Sea should be higher than the desire to conduct commercial fishing for mussels in the area. The Wadden Sea as nature area also supports many local workplaces through attracting tourists to the area and the region.”

Mogens Jensen / Nis Christensen

Environment and Food Committee 2019-20

MOF General part - final answer to question 616

Classification: Public