

Wadden Sea Board

**WSB 7
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Subject:	Business Plan
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Attached is a guidance document on sustainable fisheries, as elaborated by the Steering Committee Sustainable Fisheries and the Task Group Management, upon request of WSB-6

Proposal	The meeting is invited to discuss the document and to decide upon the proposal contained in chapter 5
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Wadden Sea Sustainable Fisheries. Guidance Document WSB

1. Introduction/Background

At the 2010 Wadden Sea Conference the Wadden Sea Board was requested to develop Wadden Sea wide trilateral policy principles for a further development of sustainable fisheries, inter alia aiming at the consistent implementation of the Natura 2000 objectives, in close cooperation with the fisheries sector and nature NGOs [Sylt Declaration §17].

As a first step WSB-3 (March 2011) decided to commission a study, on the basis of which it would, amongst others, be decided whether or not a Task Group Fisheries should be installed.

The tasks of the study were:

1. Inventory and analysis of current situation with regard to fisheries in the trilateral Wadden Sea, including structure and economic situation of sectors, methods, areas, catches + catch development (spatial fisheries activity data in the Wadden Sea), legal system, regulations, protection, licensing, quota, outstanding and problematic issues in the implementation of the Habitats Directive, Marine Stewardship Council (MSC) procedure. Relevant connections with EU fisheries policies. Overview of current knowledge about impacts of fisheries on the ecosystem, in particular of shrimp fishing, import of seed mussels, bottom mussel seed fishery and (rope) mussel cultures. Inventory of most relevant knowledge gaps.
2. Development of definitions of and recommendations for sustainable fisheries, with a focus on the specific Wadden Sea situation, in the sense of ecological, economic and social sustainability, from the perspective of nature protection, including strong sustainability, where ecological sustainability forms the limiting factor. Description on the basis of concrete, understandable and measurable criteria, differentiated for protected and non-protected areas. Inventory of best practices.
3. Recommendations for the further process of developing, together with the stakeholders involved, commonly shared principles for sustainable fisheries in the Wadden Sea, including the option of establishing a Task Group Fisheries.

The study was commissioned to the UK/D/DK consortium MEP/Bioconsult/IFM. The work started in October 2011 and the final report was discussed by TG-M on 13 September 2012. The work was supervised by a Steering Committee consisting of representatives of the National Park Agency Schleswig-Holstein, the National Park Administration Niedersachsen, the German Federal Agency for Nature Conservation and the Dutch Programme towards a Rich Wadden Sea.

Based upon recommendations for the further process by TG-M, WSB-6 (5 October 2012) decided that, before publishing the report, a common trilateral position regarding the report should be drafted. To this end WSB mandated TG-M (through the Steering Committee) to draft a guidance document, leading to a common position of the TWSC in accordance with §§ 16-17 of the Sylt Declaration, for submission to WSB-7, containing:

- a review of the main conclusions and recommendations of the report, including a prioritisation;
- a review of the main strengths and weaknesses of the report;
- proposals for an operationalization of the suggested sustainability criteria within the “indicator based framework” that was developed in the report, including a specification of the fishing gears contained within the criteria;
- proposals for the further process;
- recommendations for structuring the dialogue with stakeholders (fisheries sector + green NGOs).

2. Review report sustainable fisheries

The report contains a comprehensive overview of current fisheries in the Wadden Sea (Task 1). With regard to Task 2, the analysis of fisheries according to sustainability criteria, there are several weaknesses, in particular regarding the elaboration of the definitions of weak, medium and strong

sustainability and the practicability of the criteria to differentiate between these categories. A listing of main strengths and weakness of the report is in **Annex 1**.

The main conclusions of the report are that,

1. Generally, strong sustainability is regarded as a necessary condition for complying with the Wadden Sea Natura2000 objectives and the trilateral Targets.
2. MSC standards are, generally, only compatible with weak sustainability.
3. Current shrimp fisheries generally do not meet weak and medium sustainability criteria.
4. Blue mussel fisheries in Germany generally do not meet strong or even medium sustainability criteria because of lacking appropriate assessments¹; In the Netherlands almost all components of strong sustainability will be met, if the mussel transition programme is fully implemented; Danish blue mussel fisheries comply with strong sustainability because this type of fisheries is not allowed.

With regard to the task of developing proposals for an operationalization of the suggested sustainability criteria within the “indicator based framework”, the steering committee and TG-M recommend to focus on describing the conditions for strong sustainability, rather than finding criteria to differentiate between strong and medium and medium and weak sustainability.

The line of reasoning from the report that the absence of an appropriate assessment would mean non-compliance with strong sustainability is not supported. In such cases it cannot be judged whether or not an activity complies with strong sustainability.

The central recommendation of the report concerns the use of regular and trilaterally harmonised appropriate assessments, as a basis for judging strong sustainability, even in the case such assessments are not legally mandatory.

A full analysis of the conclusions and recommendations of the report is in **Annex 2**.

The following procedure is proposed by the steering committee and TG-M is based on the analysis of the report and own expert knowledge

3. Strong Sustainability Fisheries (SSF)

The main common principle for fisheries in the Wadden Sea is that it will have to comply with the conditions for strong sustainability, because only in this way the requirements of the Birds, Habitats, MSFD (and other relevant) Directives, as well as the trilateral Targets and the Guiding Principle can be met. The World Heritage requirement of maintaining the integrity of the ecosystem will be beneficial for the integration of the above requirements.

The specification and implementation of nature objectives is the result of political decision-making and the status of scientific knowledge. Therefore, SSF is a continuous process of inclusive transition towards greater sustainability, in accordance with the principles of adaptive management. This implies that in the course of time impacts on the ecosystem are incrementally reduced by applying and testing new techniques, practices and management options.

3.1 Nature Conservation

The report also revealed substantial differences in nature conservation practices and policies between the Wadden Sea countries and that there is considerable scientific and political dispute about the interpretation of the relevant EU Directives. Still it is considered feasible to develop a common approach to Wadden Sea fisheries when following a pragmatic approach.

This process will certainly benefit if on a trilateral level

- general guidelines for fishery in the Wadden Sea conservation area are developed, such as no fishing on intertidal mussel beds, minimum percentage of no-take or no-use zones;
- knowledge is shared;

¹ In Schleswig-Holstein appropriate assessments are available

- common positions on new developments are taken, e.g. electric fishing, fishing on new species.

3.2 Definition Strong Sustainability

Natural capital and ecosystem services may not be replaced by other forms of services and capital (financial, economic, social). This does not mean that no biomass may be taken from the system. Fishing under this form of sustainability is only possible if it can be demonstrated that impacts cannot be reasonably expected to and are not likely to negatively affect the integrity and function of the ecosystem. In case impacts cannot be suitably quantified, the precautionary principle is applied.

3.3 SSF Principles

TG-M and the steering committee have identified a catalogue of principles, required for the implementation of strong sustainable fisheries, which is listed below. It is proposed that these principles are discussed with the stakeholders in the run-up to the conference, leading to a commonly agreed list of principles, to be signed by all parties at the Conference. In the period after the conference the common principles will be made operational in a dialogue process with the stakeholders (see also chapter 5).

Appropriate assessment

The use of regular appropriate assessments (or equivalent impact assessments) should be adopted by all Wadden Sea regions and applied to all licensed fisheries. 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.

Fishing gear/best practice

The application of appropriate fishing gear and best practices is another essential element in operationalizing SSF, in particular with the aim of reducing impacts on the bottom and reducing by catch. Best practice is understood to be a combination of fishing techniques and fishing effort, including real-time closures (RTC)². A detailed analysis of fishing gear (application, site specific impact) must be available before starting the dialogue with the stakeholders³.

The fishing industry should be encouraged to develop more sustainable techniques and practices.

Closed areas

Closed areas are an important management option for SSF, in particular to secure biodiversity and in cases where there is insufficient knowledge about impacts. Sufficiently large closed areas also serve as reference and recovery areas but can also be assigned on the basis of their intrinsic values.

² RTC: Closing areas for a certain period of time, for example in the moulting period of birds or when bycatch rates are exceeding certain levels

³ Such an analysis is available for the Netherlands (NEA report). In Germany a project on optimizing nets for reducing bycatch in shrimp fisheries has just started (CRANNET)

Monitoring/control/black box

This includes monitoring of fishing efforts and the status of fished and non-fished areas. The fisheries sector must be made co-responsible for monitoring (also financial). Black boxes, or equivalent systems, must be installed on all vessels. This is an important precondition for co-management, including nature protection.

Stock assessment

Regular stock assessments must be carried out as a basis for licensing. This is an essential element for implementing SSF. Although strong sustainability does not mean that no biomass may be taken from the system, the taking should be such that stable food webs are maintained, supporting natural populations of predators.

Appropriate knowledge<>responsibility of sector

In the process of operationalizing SSF, use must be made of best available knowledge. There is a clear responsibility of the sector in delivering knowledge about the status of the ecosystem, for example location of subtidal reefs.

Best practice pilots (learning by doing)

Transition towards SSF also implies that there must be ample possibilities for testing new methods and practices. Knowledge gained in pilots must be spread among the fisheries and nature protection community.

4. Main issues at stake (in order of priority)

The spectrum of fisheries practices and related impacts on the ecosystem is very broad. This makes it necessary to set priorities in the process of transition towards SSF. Below an overview is given of main types of fisheries and fisheries related impacts. It is proposed to focus on the first four entries in the first phase of the dialogue, being the main fisheries activities in the Wadden Sea Area.

1. Blue Mussel fisheries <i>Mussel beds</i> <i>Sabellaria</i> <i>Birds</i> <i>Seed imports/Ecosystem</i> <i>Culture lots</i>	Management of Intertidal and subtidal beds Knowledge gap Food reservation policy Threat of importing exotic invasive species along with mussel seed imports. Competition for space with nature conservation interests
2. Artificial Seed Collectors <i>Landscape, benthic habitats and possible by catch species</i>	With the growth of the number of ASC some issues which seemed minor become more apparent. Issues to be addressed: Space limitation, effects on the benthos by detritus and nutrient cycle, possible by catch of birds and sea mammals, deterioration of the landscape, Impacts on food web and ecosystem processes. Risk of settling of invasive species. Disturbance through maintenance activities. Increasing need for high quality culture plots.
3. Shrimp fisheries <i>Benthic habitats</i> <i>Shrimp stock</i> <i>Fish stocks</i>	Bottom trawling with high fishing pressure leads to impact and disturbance of bottom habitats. Knowledge is lacking on the impact of the traditional gear on the bottom habitat. Inventory of current research. Impact on shrimp stock Bycatch of (juvenile) fish is a problem. Veil nets and separator panels provide some relief. Real time closures (RTC) in times when bycatch rates are too high could help to reduce the impact

4.Small scale commercial fisheries, including static gears	How to deal with fishery activities on new species, for instance Pacific oyster, Ensis. Registration of fishing effort, catch and bycatch Management of fish stocks Incidental by catch of birds and sea mammals by static gears
5.Cockle fisheries <i>Benthic habitats</i>	Well protected because mechanical dredging is prohibited. Hand-raking in NL to be managed
6.Towed bottom gears <i>Fish stocks and benthic habitats</i>	Many licenses circulate under the fishing community in the Netherlands. Because of the lack of target species they are almost never used, but they can form a threat if recovery of fish stocks should occur.
7.Towed pelagic gears <i>Birds</i>	Some companies fish for sprat (<i>Sprattus sprattus</i>) or smelt (<i>Osmerus eperlanus</i>). There are no stock assessments and nature organization question whether these fisheries are of any influence on bird stocks.
9.Non-commercial fishing	Disturbance

5. Further process, including stakeholder dialogue

TG-M and the Steering Committee emphasize the need for a political backing of a well-structured and new dialogue with the stakeholders. Fisheries policies and management are very different between the Wadden Sea states and attempts for a trilateral dialogue between authorities, the sector and nature NGOs have not been successful in the past. Moreover, the dialogue process will require considerable efforts. It is anticipated that two parallel processes are needed (blue mussel sector and shrimp sector), and that for both an independent chairperson, as well as simultaneous translation will be required.

In order to guarantee sufficient political backing, it is proposed to start a harmonised process with the relevant stakeholders, leading to an agreement on common principles for sustainable fisheries, to be signed by the responsible ministers, the fisheries sector and nature NGOs at the 2014 Wadden Sea Conference. The agreement will also contain the roadmap for the joint implementation of the common principles that will start after the Conference.

For the preparation of this event, the following steps are needed:

1. WSB heads of delegation to consult the responsible ministers at the national level about this proposal. Deadline: end of March 2013.
2. WSB heads of delegation to exchange the outcome of the consultations in a telephone conference and to decide on go or no-go. Deadline: Mid April 2013.

In case of a positive decision:

3. Stakeholders are contacted at the national level and invited to participate in the preparation of the event. They will be provided with the fisheries study, including an accompanying document with the review of TG-M and the Steering Committee based upon Annexes 1 and 2 of the Guidance document. Deadline: end of April 2013.
4. Discussion between authorities and stakeholder starts at the national level. Common starting point for the authorities are chapters 3 and 4 of the Guidance document.

Deadline: end of May 2013.

5. Trilateral discussion starts on the basis of the outcome of the national discussions.

Deadline: end of August.

6. Finalisation of a common final draft document, agreed by all parties. Deadline: end of October 2013.

7. Official signing of the document by all parties during a special event at the 2014 Conference.

In case of a negative decision

TG-M prepares an alternative proposal on the basis of guidance by the WSB telephone conference, for submission to the WSB-8 meeting. The WSB telephone conference decides on whether or not to publish the report.

Annex 1. Main strengths and weaknesses

Strengths

The overview of facts is comprehensive. The report provides a good overview of fisheries in the trilateral Wadden Sea and also of the conflicts between fisheries and nature protection. The conclusions on differences between national management of blue mussel (pages 68/69) and shrimp (pages 83/84) are quite interesting and important for the further discussion.

The practical application of the sustainability framework leads to a number of interesting insights and conclusions, in particular that:

- MSc standards are generally only compatible with weak sustainability
- Strong and even medium sustainability criteria for blue mussel fisheries in SH and NdS are rarely met, mainly because appropriate assessment are not, or not often enough, carried out. In the Netherlands almost all components of strong sustainability will be met, if the mussel transition programme is fully implemented; Danish blue mussel fisheries comply with strong sustainability because this type of fisheries is not allowed.
- Shrimp fisheries generally do not meet weak or medium sustainability criteria
- Strong sustainability in terms of minimising impacts on food availability for birds, cannot be met as long as mussel and cockle fishing takes place
- With current knowledge gaps about *Zostera* and *Sabellaria* none of the fisheries can meet strong sustainability criteria.

A catalogue of recommendations is provided.

Weaknesses

The definitions of weak, medium and strong sustainability in section 3.2.1 are inconsistent with the literature analysis given on pp 114-115. There is inconsistency between the three definitions and they contain undefined elements. They are furthermore incomplete, i.e. not fully covering the necessary criteria for discrimination. The definitions are only partly compatible with the sustainability framework from 3.2.2, which is based upon ecosystem components (habitats, species) but not on processes, functions and integrity.

The precautionary principle is not understood in the way of the steering group members and TG-M.

The criteria applied are not specific enough for practical use.

With regard to recommendations for the stakeholder dialogue, an analysis of past developments and the ideas and feelings of directly involved stakeholders is lacking.

The report hardly or not contains information on non-commercial fishing and static small scale fisheries.

Thus the report is useful as technical background paper, but does not give solutions for political questions.

Annex 2. Review of Conclusions and recommendations

Conclusions

1. The MSC standard was generally on the 'weaker' end of the gradient than the Trilateral Targets for the Wadden Sea. This stemmed from the fact that the MSC standard is specific to fisheries, not nature protection per se. This approach implies almost immediately a weak to medium approach to sustainability (at least under the definitions proposed in this study), since fishing is by definition an activity that is extractive from the marine environment. Trilateral Targets, conversely, start from the desired overall outcome of high nature protection and therefore generally meet the strong sustainability criteria.

Conclusion supported with the clarification that strong sustainability does not mean that no biomass may be taken from the system.

2. Some of the Trilateral Targets may not be met even if all Wadden Sea fisheries meet the strong criteria. This is due to the fact that in some cases fishing activities are not the limiting factor for meeting the Trilateral Targets, but other natural or anthropogenic factors are.

Not considered relevant for the purpose of the study. This conclusion is probably based on a misinterpretation of the trilateral Targets.

3. For the mussel fisheries, DK met the strong sustainability criteria by default as the mussel fishery in that part of the Wadden Sea is currently closed. In NL, most of the components met the strong criteria and this is mainly due to the closure of the intertidal to the mussel fishery, the presence of a comprehensive harvest strategy, the gradual phasing out of the wild seed fishery and the use of annual appropriate assessments. DE, where neither SH or LS use annual appropriate assessments and where area closures are the main harvest control tool, strong sustainability was rarely met.
4. Among the three main fisheries, the Wadden Sea cockle fisheries achieved the highest sustainability overall. DE met strong sustainability for all components as no cockle fisheries are allowed in any of the national parks and none take place outside the conservation areas. For the remaining NL and DK cockle fisheries, the achievement of strong sustainability was in most cases based on the annual use of appropriate assessments (NL) or Environmental Impact Assessments (DK) which ought to identify any negative impacts on designated habitats and species and therefore ought to ensure the protection of those features.
5. The strong sustainability criteria for Wadden Sea shrimp fisheries were generally not met and both the weak and medium criteria could be met on only some occasions. The most significant obstacles to meeting strong sustainability were the absence of annual appropriate assessments in the case of NL and DE, the overall lack of fleet- specific quantitative data on bycatch and discards and the uncertainty as to the ecosystem effects this fishery may have.

Line of reasoning in conclusions 3, 4 and 5 not supported. The absence of an appropriate assessment does not mean that fisheries do not comply with strong sustainability criteria but that this cannot be judged. In case AA is applied, the outcome may also be that fisheries do not comply with strong sustainability.

Cockle fisheries not considered a priority issue since mechanical cockle fisheries factually phased out in the Wadden Sea.

6. Although significant measures are already in place (TAC, food reservation policy for birds, area closures) to minimise any impact on the food availability for birds in the general Wadden Sea, strong sustainability cannot be met as long as a wild mussel and cockle fishery takes place.

Conclusion not supported. Taking should be minimised, based upon food availability for and food demand of birds. Strong sustainability does not mean that no biomass may be taken from the system.

7. With some exceptions (particularly intertidal *Zostera* in NL), the incomplete knowledge base with regards to the occurrence and distribution of *Sabellaria* reefs and *Zostera* fields meant that practically none of the assessed fisheries could meet the strong sustainability criteria.

Lack of knowledge can be dealt with by, for example, closing areas with high chances of recovery of these species. See also Recommendation C.

Recommendations

- A. The use of annual appropriate assessments (or equivalent impact assessments) which are scientifically robust and which are adopted by all Wadden Sea regions and applied to all licensed fisheries is absolutely central in the concept of strong sustainability from the perspective of nature protection in the Wadden Sea as defined under the Habitats and Birds Directives. The use of regular (if possible annual) 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.
- B. In the case of the DE mussel fisheries, the team advocates the use of a comprehensive harvest control mechanism which is based on annual stock assessments and takes into account the feeding requirements for birds.

Recommendations A. and B., in combination with H. supported. Appropriate assessments not necessarily on an annual basis, but regularly. Should be comparative and transparent.

- C. Where no data are available on the distribution and occurrence of *Sabellaria* reefs and/or *Zostera* fields, a precautionary approach should be adopted by all Wadden Sea regions concerned. This could involve a systematic recording and knowledge sharing system for reports of *Sabellaria* or *Zostera* occurrence by local actors so that areas of known occurrence can be actively avoided. It is also recommended that a routine monitoring programme is put in place and that this is a concerted effort between the various Wadden Sea regions (under for example the Trilateral Monitoring and Assessment Programme which is further discussed below). Once the distribution of *Sabellaria* and *Zostera* in the Wadden Sea is known (if any) protection measures should be put in place.

Primary settling grounds to be closed for fisheries. For the subtidal more knowledge needed. Sector to play an active role in providing information. A code of conduct is needed for the sector for the reporting of nature values in the subtidal.

- D. It is anticipated that ASC installations in the Wadden Sea will expand significantly in the near future. It is important that cumulative impacts are considered in the appropriate assessments for each separate ASC installation. This is of particular importance from the perspective of general disturbance to birds and mammals and from the perspective of ecosystem carrying capacity.

Recommendation supported

- E. VMS currently only allows the surveillance of vessels of over 15 m length. Smaller vessels which have the potential to reach fishing or shrimping grounds closer inshore are not monitored. It is recommended that a vessel monitoring system for all fishing vessels (including shrimp vessels) is developed, thus providing information on all fishing locations and fishing effort, allowing more strict surveillance and informing on the establishment of future management actions such as zoning.

A black box for all vessels is needed. This is also the basis for co-management, i.e. more own responsibility of the sector.

- F. It is recommended that a trilateral and strategic approach to develop and implement a research plan for the Wadden Sea ecosystem from the perspective of sustainable fisheries is adopted, including the use of both scientific and quantitative data collection and traditional or local ecological knowledge. A list of suggested research topics has been provided in the report.

Recommendation considered overdone. Relevant knowledge must be delivered by the sector (see also C.). Knowledge of gears and their impacts is needed, as well as on-going exchange of best practice.

An overview must be made of on-going and planned research.

- G. Even when data gaps are filled, it is recommended that monitoring is continued on a systematic basis. TMAP provides the ideal framework to implement a systematic and trilateral monitoring programme for the Wadden Sea. We fully agree with the recommendations put forward in the 2010 Wadden Sea Plan (CWSS, 2010) on harmonisation, knowledge sharing, parameters and ecological research. A significant amount of work remains to be done, but it is only through these efforts that the existing knowledge gaps can be filled and appropriate management measures can be taken.

There does not seem to be a real danger that this will not be done.

- H. The VIBEG agreement, discussed in Section 2.2.4, provides proof that progress can be made by reaching compromise between fisheries stakeholders through a structured and well-informed dialogue. A similar approach would certainly seem the way forward for sustainable Wadden Sea fisheries at a trilateral level. For this to even have a chance of success, however, a first step would be to create a level playing field – particularly how fisheries are regarded by the respective nations in relation to the Habitats and Birds Directives – in particular, this relates to the use of the appropriate assessments which has been discussed previously.

See A. and B.

- I. Natura 2000 provides a static basis for management which is potentially unsuitable in a changing environment of which a key driver is climate change. One means of addressing this issue would be a process of 'adaptive management' where the baseline situation is constantly assessed. This type of adaptive management however is not straightforward. It starts with a detailed understanding of how the ecosystem functions, and how the ecosystem is changing over time. The TMAP framework as well as the appropriate assessments would be valuable tools in answering questions on the impacts of environmental change in the Wadden Sea and sharing those with relevant stakeholders, including the fisheries sector and the various jurisdictions can be supported in working towards adaptive management.

Adaptation is first of all relevant for fisheries practices, not for N2000. The MSFD already considers adaptive management.