

Wadden Sea Board

**WSB 6
5 October 2012
CWSS**



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| Agenda Item: | 5 |
| Subject: | Sustainable fisheries |
| Document No. | WSB 6/5-4 |
| Date: | 24 September 2012 |
| Submitted by: | TG-M |

Attached is a review by TG-M of the final report "Sustainable fisheries in the Wadden Sea", as requested by the WSB telephone conference of 28 June 2012. Also included in the document are proposals by TG-M for the further process

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| Proposal | The meeting is invited to note the review and to decide upon the proposals for the further process |
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SUSTAINABLE FISHERIES. FINAL REPORT.

Background

At the 11th TGC (2010) the need for Wadden Sea wide policy principles for the further development of sustainable fisheries was acknowledged. 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. At the WSB telephone conference of 7 July 2011 it was agreed that the study should focus on an inventory of facts and figures and on the development of criteria for sustainable fisheries, including strong sustainability.

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. Financial support was provided by the Dutch programme towards a Rich Wadden Sea, Schleswig-Holstein, Lower Saxony and the Federal Ministry for the Environment (BMU). 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. The summary and recommendations of the report are in **Annex 1**.

TG-M review

TG-M in consultation with the Steering Committee concluded that 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, TG-M concluded that the response to this task has 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.

Still, the report addresses several central questions related to weak and strong sustainability, and provides a basis for further discussion and development through a series of constructive conclusions and recommendations. With regard to Task 3, how best to use the report in a dialogue with the fisheries sector and other stakeholders, the report recommends to set up a Regional Advisory Council (RAC) for fisheries in the Wadden Sea. TG-M has doubts regarding the added value and feasibility of this recommendation without clear political support and commitment for the dialogue with the fisheries sector and other stakeholders .

TG-M has adopted the report in a technical sense, which implies that the contract with the consortium is regarded as fulfilled. The consortium has been requested to correct some factual errors, as well as the incorrect interpretation of the precautionary principle in the definitions of sustainability.

Proposals

TG-M proposes that

1. WSB mandates TG-M (through the Steering Committee) to draft a guidance document 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 operationalisation 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 (e.g. development of common standards for appropriate assessments of fisheries under the Habitats Directive, e.g. including a requirement for appropriate reference areas as a basis for impact assessments);
- recommendations for structuring the dialogue with stakeholders.

2. Between WSB-6 and WSB-7, WSB informally consults the fisheries sector on their preferences regarding structures and arrangements for a stakeholder dialogue.

3. WSB-7 decides on the further process on the basis of the guidance document and the informal consultations with stakeholders

Annex

Sustainable fisheries in the Trilateral Wadden Sea

Final Report

by

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MEP Report Ref. 2471R02B

July 2012

SUMMARY

The Wadden Sea is situated along the coasts of Denmark, Germany, and The Netherlands, separated from the North Sea by small islands and sandbanks. Despite a range of anthropogenic pressures, including industrial activity, coastal development and resource exploitation, the Wadden Sea ecosystem is recognized as a biologically highly productive ecosystem of great natural, scientific, economic and social importance, and sites within the region are listed under the Ramsar Convention on Wetlands of International Importance, the EC Habitats and Birds Directives (as part of the Natura 2000 network) and the UNESCO World Heritage List. Within the Wadden Sea Area, commercial fisheries (mainly shrimp and shellfish fisheries) form an integral part of the region's traditional economic activities.

The study "Sustainable Fisheries in the Trilateral Wadden Sea" was carried out on behalf of the Wadden Sea Board by MacAlister Elliott and Partners Ltd. (MEP) in collaboration with Innovative Fisheries Management (IFM) and BioConsult SH. The study was jointly financed by the Dutch Programme "Towards a Rich Wadden Sea" (PRW), the Lower-Saxonian Ministry for Environment, Energy and Climate Protection and the Schleswig-Holstein Ministry of Agriculture, Environment and Rural Areas.

The central aim of the study is to "advise the Trilateral Cooperation on the protection of the Wadden Sea on definitions and, where applicable, concrete, understandable and measurable criteria for *strong* sustainability in Wadden Sea fisheries with a unified, trilateral approach which safeguards nature protection in line with the 2010 Wadden Sea Plan and with a special focus on the Habitats Directive and its Natura 2000 objectives."

The two objectives identified to achieve this central aim are the following:

I. Draft recommendations for sustainable fisheries in the Wadden Sea;

II. Advise how these recommendations should be taken forward in a process in which trilateral principles for sustainable fisheries are elaborated.

The requirement for this study stems from past and current difficulties in harmonising commercial fisheries management and nature protection in the Wadden Sea, with conflicts between industry representatives, nature conservation NGOs and government institutions culminating in court cases, some of which have been high-profile (e.g. the 2004 European Court case on mechanical cockle fisheries in the Dutch Wadden Sea). An added difficulty is the transboundary nature of the region, and efforts to adopt a concerted approach in Wadden Sea fisheries management and nature protection have met with difficulty despite the fact that this is not a new concept. In the 1970s, it was recognized by the Wadden Sea governments that joint cooperation was essential for comprehensive protection of the area, including the coordinated implementation of the Ramsar Convention on Wetlands and the European Birds and Habitats directives. The Joint Declaration on the Protection of the Wadden Sea, which is the formal basis of the trilateral Wadden Sea cooperation, was

adopted in 1982 and renewed in 2010. The 1997 and 2010 Trilateral Wadden Sea Plans institutionalize the aims of the cooperation (Enemark, 1998). The Common Wadden Sea Secretariat (CWSS) was established in 1987 as the Cooperation's secretariat with the primary task of supporting, initiating, facilitating and coordinating the activities of the collaboration. Recognising the past difficulties in developing a harmonised, trilateral approach in Wadden Sea fisheries management and nature protection, CWSS, on behalf of the Wadden Sea Board, commissioned this study to provide a starting point for a renewed dialogue on sustainable fisheries management between the Wadden Sea stakeholders in the three nations and provide for a decision-making tool to establish a common trilateral view for sustainable fisheries.

Over the last decade the notion of sustainable fisheries has gained in momentum on a global scale. The Wadden Sea is no exception and recent years have seen an increasing number of Wadden Sea fisheries achieve ecolabel certification, particularly against the Marine Stewardship Council (MSC) Standard for sustainable fisheries. Despite the clear, positive message associated with the MSC ecolabel, the trilateral Wadden Sea cooperation would like to further explore the coherence between MSC certified fisheries and nature protection in the Wadden Sea through the Wadden Sea Plan, national regulations as well as Natura 2000. A part of this study therefore examined how the MSC standard compares against the different benchmarks of sustainability as they are defined in this analysis.

This summary presents the key findings of the study, with the more detailed analysis available in sections 1 to 5 of this report, the structure of which follows the Tasks identified at the start of the analysis:

Task 1: Conduct an inventory of the legal framework for the implementation of the Habitats and Bird Directives in each Wadden Sea country and present an overview of the current situation of Wadden Sea fisheries (Section 2).

This has been achieved by:

- Exploring how the EC Habitats and Birds Directives have been interpreted and implemented in the three Wadden Sea countries (Section 2.1).
- Creating an inventory of the fisheries situation in each Wadden Sea country (Section 2.2)
- Determining to what extent fisheries management is in agreement with Natura 2000 objectives and identifying common ground and best practice between the three nations (Section 2.2 and 3.1).

Task 2: Provide recommendations of “strong” sustainability criteria for Wadden Sea fisheries (Section 3).

This has been achieved by:

- Developing a sustainability framework in order to determine how fisheries, including MSC certified fisheries, are meeting the nature protection objectives set out in the

exercise, the applicability of the MSC standard in providing for nature protection on the long term and in the context of the Wadden Sea was examined (Section 3.2).

- Overall analysis of the sustainability of Wadden Sea fisheries through a “mapping” exercise (Section 3.3).
- Recommendations for sustainable fisheries, including identifying knowledge gaps and which main steps in fisheries management are still required to comply with EC Directives (Section 3.5).

Task 3: Provide recommendations for the further process of developing commonly shared principles for sustainable fisheries in the Wadden Sea (Section 4)

The tasks were completed through desk-based research and supplemented with targeted interviews held with representatives for each of the Wadden Sea regions discussed in this report. The following stakeholders were contacted:

| Contact | Country / Region | Organisation |
|-------------------------|--------------------------------|---|
| Dr. Paddy Walker | The Netherlands | Programma Rijke Waddenzee |
| Dr. Gerald Millat | Lower Saxony, Germany | Forschungskoordination und Küstenfischerei Nationalpark- verwaltung Niedersächsisches Wattenmeer |
| Dr. Hans-Ulrich Rösner | Schleswig-Holstein, Germany | WWF Germany |
| Dr. Per Sand Kristensen | Denmark | DTU Aqua |

TASK 1 - NATURE PROTECTION IN THE WADDEN SEA AND FISHERIES REVIEW

The Wadden Sea area accessible to commercial fisheries is in its completeness protected under Natura 2000, subject to national nature protection legislation in accordance with the EC Habitats and Birds Directives. As part of the Natura 2000 network, special areas of conservation (SAC) and special protection areas (SPA) are designated by the Member States, under the EC Habitats Directive and the EC Birds Directive respectively.

The following Natura 2000 areas were identified for the purpose of this study. A full description for each site, including the designated habitats and fish, mammal and bird species has been provided in Section 2.1.

| Site | Country / Region | Designation |
|---|-----------------------------|-------------------------------------|
| Waddenzee | The Netherlands | SAC (NL1000001) and SPA (NL9801001) |
| Noordzeekustzone | The Netherlands | SAC (NL2003062) and SPA (NL9802001) |
| Nationalpark Niedersächsisches Wattenmeer | Lower Saxony, Germany | SAC (DE2306301) and SPA (DE2210401) |
| Nationalpark Hamburgisches Wattenmeer | Hamburg, Germany | SAC (DE2016301) and SPA (DE2016401) |
| <i>NTP S-H Wattenmeer und angrenzende Küstengebiete</i> | Schleswig-Holstein, Germany | SAC (DE0916391) |
| <i>Ramsar-Gebiet S-H Wattenmeer und angrenzende Küstengebiete</i> | Schleswig-Holstein, Germany | SPA (DE0916491) |
| <i>Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde</i> | Denmark | SAC (DK00AY176) and SPA (DK00AY057) |

A range of commercial fisheries currently takes place in the Wadden Sea area. A summary is presented in the table below. A systematic desk-based study, supplemented with targeted interviews was carried out for each fishery identified. Of the fisheries identified in the review, the blue mussel, cockle and shrimp fisheries were selected as main fisheries. Although finfish and other shellfish (including native and Pacific oyster) fisheries also take place, it was considered that these were too marginal and insufficient information was available to warrant an in-depth sustainability analysis for these fisheries. There are indications however that some finfish fisheries, in particular those targeting bass and mullet are gaining in importance and it is recommended that these are subject to a targeted review.

The majority of the main Wadden Sea fisheries are coastal fisheries for which the management responsibility lies with the Member States (passed on to the Länder in the case of Germany). The shrimp fisheries, which also take place beyond the 12 nm limit off the coastal baseline are subject to the principles and practices of the EU Common Fisheries Policy (CFP). Within the 12 nm limit, the EU legislations which affect fisheries management are the Habitats and Birds Directives for those areas designated under Natura 2000 (through the appropriate assessments), the 2008 Marine Strategy Framework Directive (MSFD) which provides an overarching framework for sustainable fisheries from an ecosystem-based perspective (although this is not applied in the Dutch Wadden Sea), and the 2000 Water Framework Directive which aims at the continued improvement

in fish stocks through improved habitats and improved water quality and quantity. The Trilateral Targets for the Wadden Sea as defined in the 2010 Wadden Sea Plan encompass these different approaches of EU Directives while also covering the World Heritage Criteria. The Trilateral Targets for the Wadden Sea therefore provide the common basis for the harmonisation of the different national approaches under the EU Directives within the trilateral Wadden Sea.

TASK 2 - RECOMMENDATIONS OF STRONG SUSTAINABILITY CRITERIA FOR WADDEN SEA FISHERIES

This task of the study centered on the development of an indicator-based framework for fisheries sustainability criteria, which is based on the core fisheries sustainability issues that affect or are likely to affect the Wadden Sea ecosystem. As a first step in the identification of these sustainability issues, an impact assessment was carried out for the mussel, cockle and shrimp fisheries in relation to the Wadden Sea ecosystem, including those habitats and species designated under the Habitats and Birds Directive, as well as habitats and species identified in the Trilateral Targets (defined in the Wadden Sea Plan 2010). The results of the impact analysis are not discussed in this summary, but are presented in detail in Section 3.1. The impact analysis addressed the following four criteria: status of target species and population; bycatch and discards; habitat impacts; and protected species.

The results of the impact analysis were then fed into the indicator-based framework for sustainability criteria (Section 3.2). The sustainability framework provides a structure in which the level of sustainability of Wadden Sea fisheries can be assessed along a gradient of weak to strong sustainability, and compared to the existing MSC performance indicators and Trilateral Targets for the Wadden Sea. In this way, the level of sustainability is determined against each of the key Natura 2000 qualifying features identified in Task 1, and recommendations for moving the fisheries towards stronger sustainability or towards improved coherence with nature protection requirements can be made.

Prior to establishing sustainability criteria, a review was carried out of some of the theoretic literature addressing the concept of weak and strong sustainability. The team's understanding of the difference between strong and weak sustainability is, in simplistic terms, that weak sustainability accepts substitutability between forms of capital, while strong sustainability holds that fundamental services provided by nature cannot be substituted by man-made capital. Applying the strong sustainability concept to commercial fisheries is not straightforward and there is a lack of literature about the application of the concept in practise. Part of the objective of the Common Wadden Sea Secretariat is to engage with the fishing industry to improve the sustainability of fisheries in the Wadden Sea. In the team's experience, it is critical that practicality rather than theory is at the forefront of efforts to engage with the industry if an inclusive transition towards greater sustainability is to be achieved. An attempt was therefore made to broaden the review of literature to enable sustainability criteria to be developed that could be practically applied in a fisheries context. At the basis of this more practical approach is

the notion that any ecological approach would require that the fundamental services underpinning the production of a system be maintained, i.e., it is necessary to maintain a minimum level of different types of natural capital. From a fisheries perspective, we consider that fisheries are dependent on the biophysical system they exist within, therefore for a fishery to be 'weakly sustainable' requires that the capacity of the fish stock to maintain production into the future is not compromised. Our definition of weak sustainability does take into account substitutability, whereby natural systems can be replaced by man-made systems (see definition below), whereas strong sustainability acknowledges that different types of 'capital' should be independently maintained if a system aims to be sustainable it is clear that fisheries cannot continue to exist without the ecosystem that fish live in.

On the basis of these considerations and following instructions from CWSS to develop definitions for weak, medium and strong sustainability, we applied the concept of sustainability within the boundaries of natural capital and derived the following definitions:

Weak sustainability: full and unlimited substitution of ecosystem services between ecosystem components is acceptable, on condition that the overall productivity of the ecosystem is non-diminishing over time. This definition assumes that certain types of man-made habitats may deliver the same level of ecosystem services as natural habitats (e.g. cultured mussel beds vs natural beds). This definition also assumes that because impacts on certain ecosystem components are reversible¹ weak sustainability can be met. For those impacts that cannot be suitably quantified, the precautionary approach is used on the basis that the risk posed by the fishery to ecosystem productivity is minimised.

Medium sustainability: all discrete ecosystem components are not safeguarded, but measures are in place, which prevent full and unlimited substitution of ecosystem services between ecosystem components. The level of substitution allowed must be based on best available scientific advice and must preserve an appropriate condition of ecosystem services to maintain ecosystem integrity and function. Medium sustainability assumes that enough data are available so that impacts can be suitably quantified. The precautionary approach is therefore not sufficient under this form of sustainability.

Strong sustainability: no substitution of ecosystem services between ecosystem components is acceptable and all ecosystem services must be fully protected. This means that 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 individual ecosystem components. Here also, enough data must be available so that impacts can be suitably quantified. The precautionary approach is therefore not sufficient under this form of sustainability.

¹ Reversible is used here in the context when a fishing activity stops, the affected ecosystem can recover to the state it was in prior to the disturbance.

It is emphasised that in this context, ‘weak’ and ‘strong’ are technical terms relating to how sustainability is defined, rather than value judgments.

This exercise is also not intended to pass definitive judgement on the sustainability or otherwise of Wadden Sea fisheries – it is a comparative and subjective exercise, clarifying the starting position of nature protection authorities in the dialogue with the fisheries sector and other involved stakeholders.

The resulting indicator-based sustainability framework presented in Section 3.2 was used in two ways:

- To map the Trilateral Targets for the Wadden Sea and the MSC standard for sustainable fisheries onto the sustainability gradient against the key Natura 2000 qualifying features identified in Task; and
- To map the three main Wadden Sea fisheries, taking into consideration their respective fishing methods, onto the same gradient.

From these mapping exercises, the following general observations were made. Note that that a more in-depth discussion has been provided in Section 3.2.2.

- 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.
- 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.
- 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.
- 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.

- 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.
- 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.
- 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.

These observations, in addition to the review undertaken in Task 1 and the series of case studies for shellfish fisheries in The Wash (UK), River Exe (UK) and Ria d’Etel (France) (Section 3.4) have led to a number of recommendations of which the key points are presented below:

- 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.
- 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.
- 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.

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.

TASK 3 - RECOMMENDATIONS FOR DEVELOPING COMMONLY SHARED PRINCIPLES FOR SUSTAINABLE FISHERIES IN THE WADDEN SEA

The objective of task 3 was to provide recommendations for a process in which shared principles for sustainable fisheries in the Wadden Sea can be elaborated jointly with stakeholders.

In the light of changing fisheries practices with today's abilities to detect and fish any resource with high efficiency and the changing function of the Wadden Sea there can be no doubt that regulation of the fisheries is needed in order to assure both future yields of the fisheries and to maintain ecological functions of the area. It is the understanding of the team that this is common sense amongst all interest groups of the Wadden Sea. Still, there have been intense disputes on which kinds of regulations to apply and who has the legal authority to regulate. While some conflicts are somehow natural and hard to avoid as they represent competition for a limited resource, others are the result of insufficient communication between interest groups, lack of knowledge and inconsistent decision-making processes between countries and regions. Some sources of conflict are:

- Competition for limited and decreasing resources
- Different perceptions of the problem
- Need to adapt to a changing world
- Knowledge gaps
- Different approaches in different regions
- Unclear decision processes

For the Wadden Sea region there seems to be a lack of an institution which could facilitate a discussion between interest groups which could solve or at least mediate such conflicts. Although the Wadden Sea Forum already provides a framework for stakeholder engagement in environmental issues in the Wadden Sea, the team identified a key missing element to be an effective and constructive communication link between nature conservationists and the fisheries sector. It is therefore proposed that a discussion and negotiation platform which is solely dedicated to Wadden Sea fisheries is established, in which CWSS plays a central, facilitating role, focussing on the implementation of legal requirements for fisheries management and the transition towards strong sustainability. The team recommends that an analogy to the European Commission's Regional Advisory Council (RAC) model be adopted by CWSS for the purposes of facilitating the process in

which shared principles for sustainable fisheries in the Wadden Sea can be elaborated jointly with stakeholders and broad support for these principles can be facilitated. The main task for the WS RAC could therefore be to provide the relevant Wadden Sea governmental institutions with advice on fisheries management in the Wadden Sea region. A more in-depth discussion on the functioning of the WS RAC has been provided in Section 4 of this report. This section also includes recommendations on the structure and implementation of the WS RAC.