



HARBASINS Report:

Synergies in WFD implementation in the Wadden Sea

Report from the trilateral workshop, Hamburg; 24 –25 October 2007

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1. INTRODUCTION

The HARBASINS workshop on “Synergies in Water Framework Directive implementation” was carried out to harmonize the Water Framework Directive (WFD) implementation in the Wadden Sea and to identify synergies in relation to the Birds and Habitats Directives (BHD) and the further development of the trilateral Wadden Sea Plan (WSP).

The workshop was initiated by the Common Wadden Sea Secretariat (CWSS) in conjunction with the further development of the Wadden Plan and harmonization with the stipulations entailed in the Habitats, Birds and Water Framework Directives and other European Union directives and regulations.

WFD and Wadden Sea

The implementation of the European Water Framework Directive (WFD) in coastal and transitional waters will have direct consequences for monitoring, assessment and management of the Wadden Sea. Therefore, the Netherlands, Germany and Denmark have agreed to cooperate closely in the implementation of the Water Framework Directive and other relevant directives such as the Habitats and Birds Directives (Esbjerg Declaration, 2001; Schiermonnikoog Declaration 2005).

The Wadden Sea is an example for how various EU Directives and other agreements, such as OSPAR, Ramsar and CBD can be implemented for an entire ecosystem in a harmonized way. The Wadden Sea is a natural area of world-wide importance shared jointly by the Netherlands, Germany and Denmark. Since 1978, the three Wadden Sea countries have been working together with the aim of protecting the Wadden Sea as an ecological entity. The trilateral Wadden Sea Plan (adopted in 1997) is the common management framework and defines Targets and policy directions.

HARBASINS

The Interreg IIIB project HARBASINS “Harmonised River Basins Strategies North Sea” (2005 – 2008) is enhancing the compatibility of management strategies and international cooperation for the North Sea’s coastal waters and estuaries. The main aims of HARBASINS are

- To prepare proposals for an overall coordinated management and monitoring of the North Sea coastal waters and estuaries in the framework of the relevant European directives, particularly the WFD,
- To establish a transnational network of authorities and institutions in different North Sea countries to pool experiences and investigate options for harmonization,
- To match approaches and development of instruments for management, monitoring and assessment (WFD, MD, HD, BD, ICZM, other programs).

Within the HARBASINS project, the Wadden Sea will have a pilot project function with respect to other North Sea coastal areas in which a harmonized monitoring, assessment and management scheme covering coastal and transitional waters of several River Basin Districts (RBDs) and countries is developed.

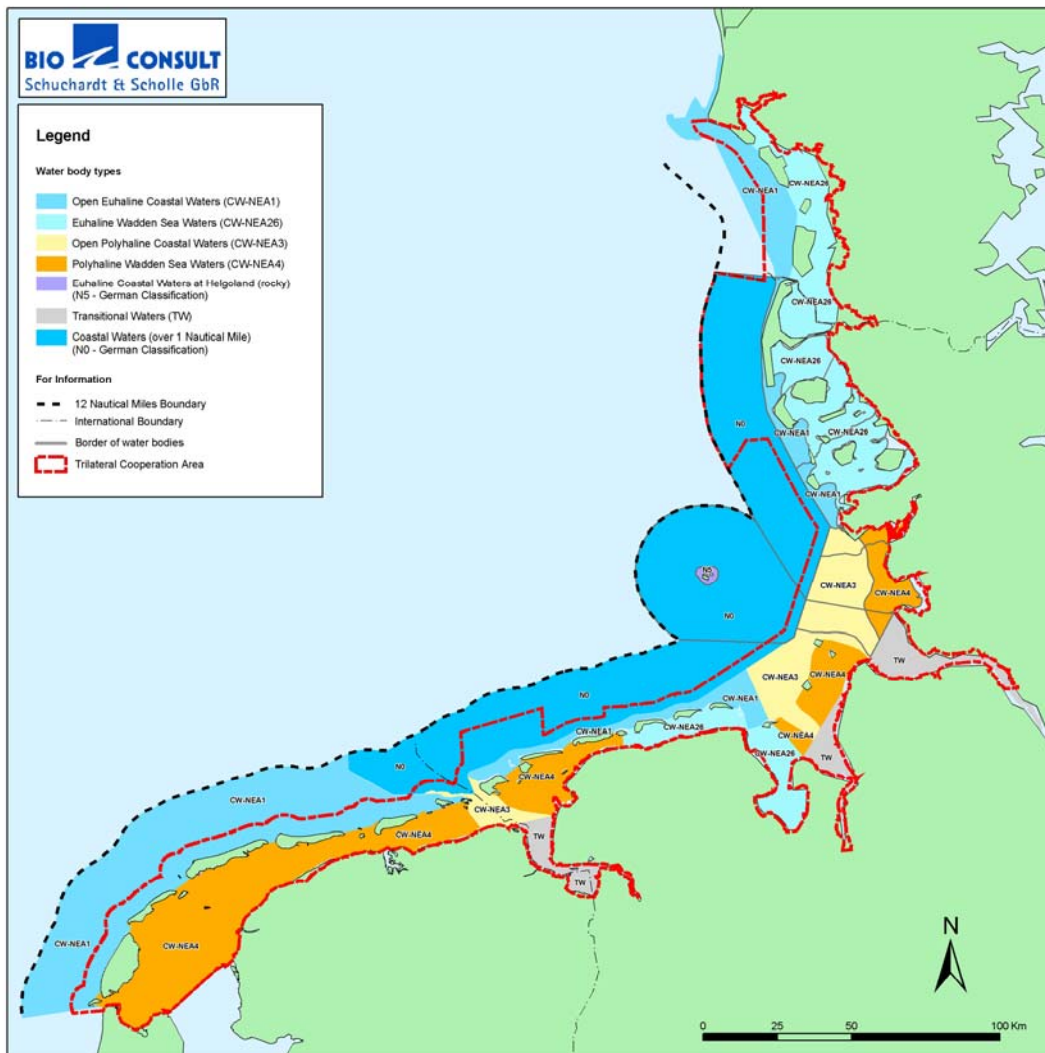
The HARBASINS project has analyzed the WFD implementation in the North Sea coastal waters and estuaries in several reports in 2006 and 2007. All reports can be downloaded from the project website (www.harbasins.org)

Workshop Participants

The workshop was attended by coordinators from the following bodies in charge of implementation of the WFD in the Wadden Sea coastal and transitional waters:

- Ministry of Transport and Water Management, Leeuwarden
- Ministry of Agriculture, Nature and Food Quality, Regional Department, Groningen
- Lower Saxony Agency for Water Management, Coastal Defence and Nature Conservation, Oldenburg
- Ministry of Agriculture, Environment and Rural Areas, Kiel
- Schleswig-Holstein Agency for Nature and Environment, Flintbek
- Ministry of the Environment, Environmental Center Ribe

The list of participants is in **Annex 1**



Distribution of coastal and transitional types of waters in the Wadden Sea area (NL: the type CW-NEA 3 extends to 12 sm with regard to the physicochemical quality components). CW-NEA = Coastal waters Northeast Atlantic new Type ID. Water bodies in Lower Saxony/NL/DK – one coloured area is equivalent to one water body, for Schleswig-Holstein see plotted boundaries (from: Scholle & Dau, HARBASINS Report, November 2007).

2. WORKSHOP OBJECTIVES

The HARBASINS workshop had the following aims.

- To bring together people involved in the implementation of the EU Water Framework Directive in the Wadden Sea and to exchange information and experiences.
- To analyze the comparability of monitoring and assessment schemes of the WFD in the Wadden Sea.
- To prepare proposals for harmonization of the WFD schemes and identify synergies in relation to the Habitats Directive (HD) and the further development of the trilateral Wadden Sea Plan (WSP),
- To establish an operational information exchange network for future activities.

The workshop program is in **Annex 2**, the Terms of Reference are in **Annex 3**.

3. HARMONIZATION OF CLASSIFICATION TOOLS

3.1 Similarities and differences of assessment tools – a comparative analysis

Mr. Scholle (BioConsult) presented a HARBASINS report which describes the current status of the WFD implementation in the Netherlands, Germany and Denmark with regard to the development of reference conditions and assessment tools for the biological quality elements in transitional and coastal waters. The report also pointed out common features and differences between the WFD and the trilateral Wadden Sea Plan (WSP) and possible synergies resulting from this (Scholle & Dau, 2007: Reference conditions of biological quality components in accordance with the EU Water Framework Directive in coastal and transitional waters in NL, DE, DK. HARBASINS report, October 2007). A summary table is in **Annex 4**.

He also presented some examples of tentative WFD assessments which have been carried out in some coastal and transitional waters in order to gain experience with the assessment tools (Ems-Dollard, Elbe).

He concluded that the WFD implementation process cannot yet be regarded as completed, either nationally or internationally. The work on the assessment tools (for example on macrozoobenthos indices), class boundaries and definition of the good ecological potential (GEP) for transitional waters in Ems, Weser, Elbe and Eider will be continued, as will the EU wide intercalibration process. With regard to cross-sectoral harmonization, he saw new opportunities for further developing the common ecological Targets in the Wadden Sea Plan.

The workshop appreciated the overview presented in the report as a good basis for discussion of possibilities for harmonization in the Wadden Sea. As outlined in the report, different time scales of WFD implementation in the countries, as well as different political priorities in developing management plans will make it difficult to achieve such an ambitious goal completely. According to the stipulations in the WFD, the intercalibration process is sufficient to ensure that the assessment is comparable between RBDs and countries. Therefore, the added value of a better coordination and harmonization in the Wadden Sea and synergy with other requirements should clearly be indicated.

Mr. Witt underlined that due to fixed and very tight deadlines the development of an optimal assessment tool is difficult. As an example, he referred to the discussion on the use of the macrozoobenthos assessment tools in NL and D which will require further cooperation in the future.

The observed differences in the selection of assessment tools reflect regional differences in the major pressure. This has to be considered when exploring possibilities for harmonization.

Mr. Knudsen suggested to focus more on harmonization of the monitoring parameters instead of the assessment tools. So far, monitoring data are not comparable in detail which hampers a harmonized trilateral assessment for the entire area. Therefore, more specific monitoring guidelines are necessary.

Mr. Eskildsen supported analyzing the assessment tools with regard to the monitoring parameter used by the various approaches. Many of the monitoring parameters in the Wadden Sea are already comparable because of the long-term experience in the TMAP.

Mr. As underlined that intercalibration and development of new methods (monitoring and assessment) will continue for the next five years. For the time being, the countries have to work with what is available.

Mr. van den Berg was of the opinion that the use of specific tools and definition of class borders has to be discussed on the basis of concrete results by involving scientists and policy makers.

The workshop agreed

- To continue the information exchange in mid 2008 and to discuss the results of the ongoing data analyses which are being carried out in the various RBDs.
- To compare WFD assessment tools, selected monitoring parameters and related pressure indications and to discuss possibilities for harmonization.

3.2 Hydromorphological quality elements

Mr. Christian Reimers suggested to also analyse the parameters used for hydromorphological quality elements and to compare the parameters within the Wadden Sea. He would like to check in detail which differences and similarities occur and how to deal with them.

The workshop agreed to compile this information and asked DK and NL to deliver the relevant information to Mr. Reimers.

3.3 Cross-sectoral harmonization with Habitats Directive and Wadden Sea Plan

Mr. Knudsen underlined the necessity of connecting the WFD good ecological status (GES) and the HD favourable conservation status (FCS). Denmark has started this exercise on the national level in order to intercalibrate the FCS as done for the GES.

Mr. Rabe supported the idea of intercalibrating the definition of FCS at the Wadden Sea level. He suggested to combine the WFD and HD expert groups as has been done for the German coastal waters. Mr. As supported this proposal.

Mr. Eskildsen underlined that all directives (WFD, HD and BD) address the same area in a similar way and that synergies can be reached by combining monitoring and assessment procedures. He suggested to carry out a pilot study with the "Tidal Area" as an example for how to connect WFD and HD in the Wadden Sea.

The workshop agreed:

- That an intercalibration of criteria for HD-Favourable Conservation Status for the Wadden Sea should be carried out,
- To demonstrate WFD-HD synergies with the "Tidal Area" of the Wadden Sea Plan in a pilot study.

3.4 Information exchange

The workshop regarded this kind of information exchange to already be a kind of harmonization in the sense of the aims of the HARBASINS project (Graaf et al., 2007. WFD and coastal areas and estuaries: Legislation and administration. HARBASINS Report, March 2007).

It was agreed to organize a follow-up workshop in mid 2008 with involvement of key persons involved in the implementation of EU Directives in the Wadden Sea. If possible, experience from other North Sea coastal areas should also be incorporated.

4. HARMONIZATION OF STATUS ASSIGNMENT

4.1 Heavily modified water bodies (HMWB)

In the Netherlands, it has been decided on the political level to designate the Wadden Sea as natural waters, although an assignment as HMWB has also been discussed because of the loss of extensive salt marsh areas as a result of embankments in previous centuries.

Mr. As informed that the port sector and water boards were concerned that an assignment as natural water body would result in additional restrictions (e.g. on shipping lane maintenance or the pumping of water). Therefore, the WFD working group "ports and shipping lanes" has prepared a proposal to assign a 1 sm strip along the Dutch Wadden Sea coast as HMWB, which would include mainland salt marshes and polders, ports and pumping stations. The proposal is currently being negotiated with the Ministry of Transport and Water Management.

In Germany, the preliminary assignment of transitional waters as HMWB has been confirmed by several projects and will therefore not be changed. The coastal waters have been designated as natural waters.

In Denmark, no HMWB were designated in the Wadden Sea. Mr. Knudsen was of the opinion that a consistent approach in the HMWB discussion should be followed the three countries.

4.2 Good / moderate status assessment

In Denmark, assessment tools have been defined for coastal waters but not yet for the Wadden Sea water bodies. With regard to eutrophication, first tests have shown that the depth limit of seagrass in coastal waters gives a good correlation with nitrogen. Macroalgae coverage is also being applied as an assessment criterion. However, both metrics are not applied in Wadden Sea waters, here, chlorophyll a is the main criteria.

As in the other countries, there is insufficient information available for subtidal areas in the Wadden Sea, which makes an assessment of these water bodies problematic.

In Germany, first tentative assessments have been undertaken in some of the water bodies to test the tools (see also 3.1), e.g. with regard to tools sensitive to eutrophication pressure. Insufficient knowledge of subtidal habitats was regarded as a main gap for the WFD assessment. Therefore, in 2006/2007 subtidal sampling surveys were carried out in Lower Saxony (grab and dredge sampling) to map macrozoobenthos, macroalgae and seagrass. In Schleswig-Holstein, subtidal habitats were identified to select sampling stations.

It is planned to test the available tools with these data in winter/spring 2008 in order fine-tune monitoring and status assessment.

In the Netherlands, the discussion is ongoing on various levels to define the boundaries for good and moderate status. Mr. As presented the example of chlorophyll-a class boundaries in the various water bodies and countries. The class boundaries for German coastal water bodies are about 3 times lower than the Dutch ones; it is not yet clear how to handle this difference.

Mr. Rabe referred to the QSR 2004, where a Wadden Sea wide assessment has already been carried out which also can be used as input for the WFD. He suggested to use synergies by including the eutrophication issue into the current QSR work, because this item has to be discussed by the countries anyhow.

The workshop concluded that, because an eutrophication gradient occurs along the Wadden Sea and into the North Sea, it is necessary to address this issue on a broader geographical scale and to use the outcome from the Wadden Sea QSRs as input into the WFD work.

5. MANAGEMENT PLANS IN THE WADDEN SEA COASTAL WATERS AND ESTUARIES

5.1 General approach

Draft River Basins Management Plans (RBPM) have to be prepared by the EU member states by end of 2008. In Germany, the first draft for the Elbe RBD will be available already by the end of 2007 and for the Weser RBD by mid 2008.

Mr. Knudsen underlined that contents and schedules of the RBDM were fixed and he assumed that the Wadden Sea Plan would not go into such detail as the management plans for the WFD and BHD. He suggested to use the work for the WFD and HD, which has to be done anyhow, also for the Wadden Sea Plan (WSP). This could be done by transferring or rephrasing the WFD and HD plans into the Wadden Sea Plan terminology. He asked for a more detailed work plan for the Wadden Sea Plan, which is necessary to tune the various activities.

Mr. Knaack supported this view and remarked that all experts and managers should avoid making double work. He referred to the integrated management plans for estuaries and transitional waters in Lower Saxony which combined the stipulations from the WFD and the HD. This will also serve as input for the further development of the Wadden Sea plan. The work on the management plan for the Weser and Elbe estuaries has already started (coordinated by NLWKN Oldenburg and Lüneburg) The work on the Ems (together with the Dutch RWS) has been delayed because of legal proceedings by the Meyer-Werft.

Mr. As underlined the views of the previous speakers and suggested to integrate the WFD work into the Wadden Sea Plan.

Mr. van den Berg pointed out that the Ministry of LNV will take care that the goals of the Wadden Sea Plan, for example for salt marshes, will be integrated in the management plans for the European Directives.

Mr. Rabe explained that the positive experience from the Wadden Sea Plan and the TMAP served as input into the WFD and HD management plans in Schleswig-Holstein. The Wadden Sea Plan has a higher aggregation level than regional plans but can already be translated into the WFD and HD management plans. The Trilateral Wadden Sea Cooperation should therefore try to coordinate and integrate the various activities in the Wadden Sea area.

The workshop concluded that more connections should be established between the WFD and HD management plans and the further development of the Wadden Sea Plan, on the technical level as well as on the political level to gain synergies and to avoid double work. This can be achieved by

concrete examples (e.g. by a pilot study on “Tidal Area”) and an increased information exchange like the proposed trilateral workshop in mid 2008. The HARBASINS project is a good example how this can be supported from the EU level.

5.2 Development of WFD Management Plans in the Wadden Sea

Eutrophication in RBD Elbe

Mr. Rabe presented the current work on the WFD management plan in the Elbe RBD with regard to eutrophication (main pressure in coastal waters): setting objectives for coastal water bodies (total N concentrations), deduction of possible measures and “realistic interim targets” (reduction of N input for RBD sub-areas). There are already a number of measures available addressing agriculture pressures, as well as reports and scientific projects to support these aims. With regard to the Wadden Sea, he assumed that appropriate measures were already carried out in the National Park which will now be optimized and coordinated for the Habitats and Water Framework Directive. For the Wadden Sea, this has to be done in cooperation with the neighbouring RBDs.

During the discussion it was pointed out that the aim of GES with regard to eutrophication will probably not be reached in most of the water bodies in the Wadden Sea until 2015. The main reason is that N input via rivers (especially from the Rhine) will continue, and it cannot be expected to decrease significantly in the future.

Mr. As referred to the example of setting class boundaries for chlorophyll a (3 times lower boundaries in Germany than in the Netherlands). This will lead to a moderate or bad state in Dutch coastal waters because of the higher pressure from the Rhine.

Mr. Knudsen emphasized the fact that there is a gradient along the Wadden Sea from south to north as illustrated by the QSR 2004. He assumed that the WFD intercalibration group was not aware of this background when discussing class boundaries.

Mr. Knaack suggested to discuss this issue in the second phase of the intercalibration.

The workshop concluded that eutrophication is the main pressure for Wadden Sea coastal waters in the WFD and that most measures will focus primarily on this issue e.g. by reduction of N input from the catchment area.

The workshop agreed to prepare a trilateral workshop on eutrophication to discuss eutrophication pressures in coastal waters on a broader scale in connection with the assessment under the WFD and the planned Wadden Sea quality status report 2009.

Preparation of management plans in Lower Saxony

Mr. Knaack presented the activities in preparing the WFD management plans. By the end of 2007, an overview will be compiled containing all measures already carried out together with their relevance for achieving the GES. In addition, it will be analyzed whether main deficits occur in reaching the WFD aims, which additional measures would be appropriate and how to prioritize them. For coastal waters, the main priority are measures to combat eutrophication. Other pressures, for example concerning loss of foreland and brackish habitats, loss of sedimentation areas or fine grained sediments, and loss of species (such as Sabellaria), have less priority. For transitional waters, the primary action need identified was with regard to water quality (oxygen, turbidity) in the inner parts, loss of (semi)aquatic habitats (by diking and summerpolders), loss of shallow water zones. For transitional waters, several measures will be carried out by 2015 to improve their status, such as restoration of river banks, de-embankment of summer dikes, reduction of flood stream, restoration and revitalization of tributaries and development of integrated concepts

for planning and research. By 2030, additional measures will be implemented to reduce tidal pumping, improve the oxygen situation and to restore estuarine habitats.

The report will be finalized by the end of 2007 and discussed within the RBD cooperating bodies as well as with Hamburg, Schleswig-Holstein and the Netherlands.

Preparation of management plans in Denmark

Mr. Knudsen pointed out that the Danish Wadden Sea was designated as a natural water body. Although limited by an artificial dike line, sedimentation and morphology is considered to be natural; the dams to the islands do not interfere significantly. In Denmark, the main issues of concern in coastal waters are eutrophication and hazardous substances. In December 2007, a first draft of a preliminary management plan will be prepared. It will be discussed in 2008 and subjected to public hearings in summer of 2008. By the end of 2008, the national draft management plan will be published. It will cover all Danish waters and will contain plans on the RBD level (e.g. for the RBD Jylland/Fynen) and on the regional level, including the Wadden Sea catchment area. The latter will probably also partly cover the small international RBD along the Danish-German border.

According to the Article 5 report, all coastal water bodies were at risk of not achieving the GES by 2015. This preliminary risk analysis is now being recalculated on the basis of defined objectives and monitoring data for all 14 coastal water body types by the end of 2007.

For coastal waters, the main focus will be on nitrogen reduction in the catchment areas and some measures in the area, such as dredging regulations and fishery management, which are also relevant for the Habitats Directive. With regard to the eutrophication gradient along the coast and the inputs from other RBDs (Rhine, Weser, Elbe), it would be interesting to see how this is handled by the EU and in the intercalibration process.

Preparation of management plans in The Netherlands

Mr. As presented the recent status of ongoing and planned measures in the Dutch Wadden Sea and the Ems. Since 2006, several groups, including participation of stakeholders, have been discussing which kinds of measures should be taken, including consideration of budgets and priorities.

Different types of measures are being discussed:

- Measure funded by the present budget of the Ministry of Transport and Water Management for the period 2007-2009,
- Measures to be reported to the EU in the period 2010 – 2015 and for which a draft budget is in preparation,
- Other WFD measures which are not obligatory,
- Measures for the WFD which can be put on the agenda of third parties,
- Rijkswaterstaat (RWS) measures for period after 2015 (proposal),
- Measures with importance to be put on the agenda for the WFD after 2015.

Present measures cover the Integrated Management Plan Ems, the freshwater discharge in the Noord Friesland summer polder, natural developments on the island of Ameland (eastern part and Noorderslenk), developing fish crossings along the Wadden Sea coast, restoration of dune dynamics on the islands (removal of sand dikes), salt marsh restoration (Noord Friesland Buitendijks).

Measures which will be reported to the EU in the period 2010-2015 comprised the restoration of submerged reefs, mussel beds and sea grass, optimization of mud deposit policy in the Ems-Dollard, distribution of seagrass seed on in the Hond-Paap (Ems-Dollard), improvement of fish migration possibilities, preferably by adapted management of sluices in the Wadden Sea, and further extension of the salt marsh area.

Other measures not obligatory for the WFD but supporting the aims concern smaller projects, for example the construction of sewage water collecting systems for leisure boats and commercial charter ships as well as fishing for litter, thus also raising public awareness for environmental

protection. Regulations for fishery and mechanical worm collection, salt marsh management, extension of closed areas, as well as shipping safety (safe haven, tug capacity) will also be considered under the WFD.

Conclusions Management Plans

The workshop concluded that the preparation of WFD management plans was at different stages in the Wadden Sea countries. Therefore, it was agreed to continue the information exchange with regard to the preparation of the WFD management plan for the Wadden Sea and to discuss this also at the next workshop in mid 2008.

The workshop concluded that many measures in coastal areas will serve both the objectives of the WFD and HD and should be combined to gain as much synergy as possible. This concerns also the further development of the Wadden Sea Plan. The follow-up activities agreed to at the workshop will help to reach this aim.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

WFD implementation and classification tools

1. The HARBASINS report on the status of development of reference conditions and classification tools for biological components (Scholle & Dau, October 2007) reflects the current status in the Wadden Sea and provides a good basis for further harmonization of monitoring and assessment.
2. The implementation of WFD classification tools has not yet been concluded in all countries, due to different time scales.
3. The development of tools, testing and adaptation of tools as well as the fine-tuning will continue and will give the opportunity for further harmonization. There are some examples of tentative classification of water bodies and definition of class boundaries (good/moderate).
4. There is still insufficient information for an appropriate assessment of subtidal areas and habitats.
5. In Germany, the preliminary designation of transitional waters as HWMB and the Wadden Sea as natural waters has been confirmed. In the Netherlands, a proposal is currently being discussed to designate a 1 sm strip along the Wadden Sea mainland coast as HMWB.

Transnational and cross-sectoral harmonization

6. Different levels of harmonization can be distinguished: transnational harmonization of the WFD and cross-sectoral harmonization between the WFD and other EU Directives and programs such as OSPAR.
7. Harmonization of WFD monitoring and assessment is carried out between the countries and in the WFD intercalibration process (NEA-GIG). A good example is the cooperation of Lower Saxony and the Netherlands in the Ems-Dollart estuary.
8. Further harmonization of monitoring programs, assessment procedures and management is necessary for the Wadden Sea area in order to manage it as an ecological entity. This concerns especially pressures which have to be addressed on a broader geographical scale such as eutrophication and hazardous substances.
9. Harmonization of the WFD concerns not only the technical level (monitoring program, assessment tools) but also the political level (definition of goals and management measures).
10. The harmonization between the Habitats and Water Framework Directive on the national level is ongoing but not yet developed in detail (according Art. 4 WFD).

Development of management plans

11. Preparations of WFD draft management plans are ongoing in all countries. More concrete proposals for measures will be available at the beginning of 2008. For some areas, integrated management plans (WFD and HD) are in preparation (Ems, Weser, Elbe, Dutch coastal waters).
12. Priority will be given to measures in transitional waters where several pressures have to be addressed with priority.
13. The main pressure in coastal waters is eutrophication, which mainly requires measures in the catchment area.
14. The main fields for achieving synergies between WFD management plans and the Wadden Sea Plan are estuaries and eutrophication.

6.2 Recommendations

It is recommended:

1. to continue the information exchange and cooperation at the Wadden Sea level in the implementation of the EU Water Framework and Habitats Directives (using existing networks) in order to enhance synergies in transnational and cross-sectoral harmonization and with the Wadden Sea Plan,
2. to carry out a pilot study on “Tidal Area” to connect the stipulations from the EU Directives with the Wadden Sea Plan requirements,
3. to harmonize and intercalibrate the implementation of the Habitats Directive by analyzing the assessment criteria for favorable conservation status trilaterally,
4. to harmonize and intercalibrate monitoring parameters and methods in the Wadden Sea in the framework of the TMAP,
5. to address eutrophication pressure on an appropriate geographical scale (Wadden Sea, North Sea). The WFD intercalibration process (NEA-GIG) should consider this aspect in its second phase when discussing class boundaries for metrics related to eutrophication.

7. FOLLOW UP ACTIVITIES

The workshop proposed the following activities to enhance the transnational and cross-sectoral harmonization of WFD and HD implementation in the Wadden Sea:

1. WFD indices/tools and related monitoring parameters

WHO: CWSS / HARBASINS

HOW: Overview of monitoring parameters required for the WFD assessment tools. Analysis of differences and similarities.

WHEN: End of 2007

2. Overview of major pressures and regional differences

WHO: CWSS / HARBASINS

HOW: Overview of major pressures and regional differences based on the QSR, Article 5 reports, WFD intercalibration, and preliminary national assessments and tests. Overview of WFD assessment tools selected for the different regions and their sensitivity for specific pressures.

WHEN: Spring of 2008

3. Analysis of hydromorphological components trilaterally

WHO: C. Reimers (lead), input by D. As & T. Knudsen

HOW: 1. Compilation of information from NL and DK (based on D table), 2. Check with NL and DK how to deal with differences.

WHEN: 1: End of 2007, 2: On national level and at trilateral workshop in 2008

4. Eutrophication pressure – regional differences/gradient

WHO: CWSS / Eutrophication experts / national WFD coordinators

HOW: Data analysis and assessment of regionally specific eutrophication in the Wadden Sea (based on results of QSR 2004), trilateral eutrophication workshop 2008, discussion of class boundaries on an appropriate scale, integration in ongoing preparation of QSR 2009.

WHEN: Autumn of 2008

5. Intercalibration of HD-Favourable Conservation Status

WHO: CWSS / HARBASINS / TWG

HOW: 1. Compilation of criteria for FCS (inventory), 2. Analysis differences and similarities (expert workshops, TWG), 3. Connection to WFD Art. 4 (Environmental objectives for protected areas),

WHEN: 1. End of 2007 (DK later) 2. and 3. In conjunction with the further development of the Wadden Sea Plan (TWG)

6. Example Tidal Area: Synergies EU Directives – Wadden Sea

WHO: CWSS, national WFD/HD coordinators / HARBASINS

HOW: Connection of goals, assessment procedures and measures using the “Tidal Area” as an example (WFD Water body / HD types and species / Wadden Sea Plan Targets). Pilot study for the further development of the Wadden Sea Plan.

WHEN: Spring of 2008

7. Trilateral Workshop on Synergies

WHO: CWSS, national WFD/HD coordinators / HARBASINS

HOW: Define contents after results of national projects are available (Spring of 2008)

WHEN: June of 2008 (in combination with HARBASINS final conference) or September of 2008

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ANNEX 2 WORKSHOP PROGRAM



Trilateral Workshop on Synergies in WFD implementation in the Wadden Sea

Centre for Marine and Atmospheric Science
Hamburg,
24 - 25 October 2007



24 October 2007

13:00 – 13:30 Introduction and scope of the workshop

13:30 – 15:00 Part I: Harmonization of classification tools

- Similarities and differences of classification tools in NL, D and DK – Inventory and analysis by Jörg Scholle, BioConsult (update of Harbasins report of April 07)
- Discussion of consequences of different approaches and investigating of feasibilities for harmonisation (plenary discussion)

Break

15:30 – 18:00 Part II: Harmonization of status assignment

- Status assignment (good/moderate) in the Wadden Sea coastal waters and estuaries
 - Presentations by NL, Nds, HH, SH, DK on experiences with the preliminary status assignment (3 – 4 presentations, 15 min)
- Discussion of consequences of different approaches and investigating of feasibilities for harmonisation (plenary discussion)

19:30 Dinner

25 October 2007

9:00 – 11:30 Part III: Synergies with the Wadden Sea Plan (WSP) and the Habitats Directive

- Management measures in the Wadden Sea coastal waters and estuaries
 - Presentations by NL, Nds, HH, SH, DK on possible management options / measures (3 – 4 presentations, 15 min)
- Possibilities for synergies with the further development of the Wadden Sea Plan (plenary discussion): WFD-Habitats Directive-Wadden Sea Plan

Break

12:00- 13:00 Part IV Conclusions and follow-up activities

13:00 Closing

ANNEX 3 TERMS OF REFERENCES



Trilateral Workshop on Synergies in WFD implementation in the Wadden Sea Hamburg, 24 - 25 October 2007 Terms of Reference (adopted at HOD 07/2, 1 June 2007)



Background

At the TWG 07-1 meeting (April 2007) a preliminary analysis of the national implementation of the Water Framework Directive was discussed (document TWG07-1-3-2). TWG 07-1 agreed that further work will be carried out on approaches to the harmonization of objectives and assessment procedures, as well as how synergies with the Habitats Directive (HD) and the further development of the Wadden Sea Plan (WSP) can be reached. This concerns:

- the definition of reference conditions,
- the establishment of classification tools for describing ecological status.

Aims

The aims of the workshop are

- To analyze the comparability of monitoring and assessment schemes of the WFD in the Wadden Sea for
 - Macrozoobenthos,
 - Macrophytes (seagrass, salt marsh),
 - Fish,
 - Phytoplankton
- To prepare proposals for harmonization of the WFD schemes and identify synergies in relation to the Habitats Directive (HD) and the further development of the trilateral Wadden Sea Plan (WSP),
- To establish an operational information exchange network for future activities.

Participation

The workshop will consist of members of national expert groups from the WFD implementation structures from each country to be nominated by the countries, and members of the TMAG and TWG. A total number of about 25 participants is envisaged.

The secretarial work will be carried out by the Common Wadden Sea Secretariat.

Time and location

The workshop is scheduled for end of September 2007, and will be held in Hamburg. The draft workshop report shall be finalized before the end of October 2007.

Responsibility

The workshop is carried out under the responsibility of the Trilateral Working Group (TWG) within the framework of the Interreg IIIB project HARBASINS.

ANNEX 4 WFD IMPLEMENTATION AND WADDEN SEA PLAN

Scholle & Dau (2007): Reference conditions of biological quality components in accordance with the EU Water Framework Directive in coastal and transitional waters in NL, DE, DK. HARBASINS report, October 2007, 64 pages.

EXECUTIVE SUMMARY

Reason and purpose of the report

Within the framework of the most recent trilateral Wadden Sea Conference it was decided to further develop the Wadden Sea Plan (WSP) and take into consideration as well as implement the legal and content-related requirements of EU directives (Habitats Directive, Bird Protection Directive, Water Framework Directive) as far as possible. Against this background – as a first step – the purpose of this report was to specify the reference conditions currently applicable within the scope of the Water Framework Directive (WFD) and describe the status of development of the assessment procedures for the relevant quality components of transitional and coastal waters. Another task was to point out common features and differences between the WSP/WFD and possible synergies resulting from this. At the same time focus was placed on the biological components in accordance with the WFD. On this basis proposals with respect to how requirements of the environmental and nature conservation tools WSP and WFD can be further harmonized had been developed.

Two further quality components, hydromorphology and general physicochemical components, 'merely' have a supporting function for assessment of the ecological state, which is essentially determined on the basis of the paramount biological quality components. For this reason the supporting components were not examined in-depth.

This also applies to the aspect of 'chemical state' in accordance with WFD. Determination of the chemical state is specified by unambiguous environmental quality standards, i.e. certain maximum substance concentrations, which are defined on a binding basis for all member states by the Commission and the EU Parliament. The problem of the different assessment procedures, as with the biological quality components, thus does not arise here.

The report was prepared within the framework of the Interreg IIIB project HARBASINS 'Harmonized River Basins Strategies for the North Sea'. The primary objective of HARBASINS is to develop proposals and approaches for improved coordination of management strategies and international cooperation with regard to achievement of environmental goals in the North Sea coastal waters and associated estuaries.

Area examined, types of waters

The area examined encompasses the Wadden Sea from Den Helder (NL) to the German Wadden Sea regions, including the estuaries of the Ems, Weser, Elbe and Eider Rivers, and also embraces the Danish section of the Wadden Sea up to approximately Blavandshuk (DK). The Wadden Sea region is defined as the seaward area between the coastline (main dike or high water line, spring tide) to 3 nm from the base line or the protected area boundaries. According to the WFD, a distinction is made between different types of waters. The currently applicable standardization was carried out in accordance with Annex II 1.1 and 1.2 of the WFD according to specific features of the respective coastal regions and their hydromorphological structures. The following five types were defined for the North Sea / Wadden Sea region on this basis: 'euhaline and polyhaline open coastal waters' and 'euhaline and polyhaline Wadden Sea' as well as 'transitional waters', the latter being limited to the estuaries of the Ems, Weser, Elbe and Eider Rivers.

Implementation of WFD

A first overview concerning the work status of the WFD assessment approaches by February 2007 was updated in October 2007. Due to some further development since spring 2007, some tentative assessment results had been available. The up-to-date survey still has shown that extensively specified assessment approaches for transitional and coastal waters, largely encompassing appropriately defined (tentative) reference conditions for quality components as well, have currently been submitted for all relevant biological quality components. In an international comparison of riparian Wadden Sea countries there are still differences regarding the concept (selection of the metrics, methodology), but in principle a certain degree of correspondence is discernible in the assessment approaches. The common features regarding the specific components are primarily related to the extensively corresponding use of measured variables for determination of the ecological state. An international communication process has led to an important exchange of knowledge and to some extent also to a transfer of assessment procedures from the respective neighbouring states. In this respect significant progress can be noted today in relation to the deficits pointed out in the analysis of the Article 5 reports (HARBASINS, 2007). However, the process cannot be regarded as completed yet, either nationally or internationally. The assessment approaches, including the reference conditions must be further validated in practice and, not least of all, coordinated and intercalibrated internationally.

Wadden Sea Plan (WSP) and WFD

A comparison of WSP and WFD goals has clearly shown that implementation of the requirements resulting from the WFD in the Wadden Sea Plan is sensible based on the extensive conformity as regards content. Since no goals have been defined according to quantity aspects within the framework of the WFD, 'conflicting goals' between WSP and WFD are not expected in this context. On the contrary, in our view the specific WFD goals and necessary examination of them can be regarded as a major support for a higher-level overall ecological assessment of the Wadden Sea region within the scope of the QSR. The following aspects relating to greater harmonization can be mentioned in this context:

- Greater involvement / use of the more concrete requirements of the WFD for the tasks and goals of the WSP, e.g. in reviewing the WSP Targets
- Improved cooperation between national and international groups of experts, targeted exchange of information
- WFD for providing support in the formulation of specific WSP goals for the estuaries that are currently underrepresented in the WSP in our view
- CWSS as an 'interface' for WFD activities of the countries in the coastal region; e.g. compilation and analysis of specific WFD results and implementation in general, overriding goals while incorporating the 'political level'
- Coordination of planning of measures that may be necessary within the framework of WFD management planning for improvement of the ecological state with the goals of the WSP even during the planning phase so as to achieve the highest possible ecological effectiveness
- Coordinating the ongoing and planned monitoring studies in the Wadden Sea more intensively, e.g. establishing a link to monitoring in transitional waters and also endeavouring to set up an interlinkage to possible future NATURA 2000 monitoring in the Wadden Sea, the Exclusive Zone (EEZ) and the estuaries. This applies even more since the different habitats, i.e. the open sea, Wadden Sea and estuaries (and/or transitional waters), are very much ecologically interlinked based on their differing functional significance for the lifecycle of species.

As can be seen in the above described aspects, implementation of the EU Water Framework Directive (and Habitats Directive) may result in new opportunities for reviewing, further developing and implementing the common environmental goals of the countries bordering the Wadden Sea formulated in the WSP and/or making them more transparent. Both the WSP and the WFD (and Habitats Directive) largely look at the same regions here, formulate environmental goals for individual components and areas, develop and/or utilize assessment procedures to describe the deviation of the status quo from these goals, conduct monitoring so as to generate the database necessary for the assessment and develop management concepts (with differing commitment) to achieve the goals.

At present these work steps largely take place parallel to each other for the three plans/directions in spite of the different approaches to harmonization so that the foreseeable synergy effects currently cannot be completely exploited (at the national and, above all, at the international level). However, the exploitation of synergy effects would facilitate determination of the status quo as well as improve achievement of the goals, reduce costs and/or increase effectiveness and enhance acceptance among the public. It is conceivable to continue to pursue a generally more ecosystem-oriented and cross-border approach here with the targets defined within the framework of the WSP in contrast to the WFD or Habitats Directive (e.g. as a political agreement). This means that the Wadden Sea Plan may provide a further level (level of analysis or action) in addition to the other tools, without contradicting the latter.

To interlace the three tools, WSP, WFD and HD Directive, better with one another in this respect and develop the synergy effects, it may be helpful in our view to point out these synergy effects to the actors involved on the basis of concrete examples, to generate a basis for discussion oriented to the specialized field and to make use of the national and EU management tools (WFD, HD) to achieve the Wadden Sea goals.

Against this background it would be conceivable, for example, to elaborate possible synergies for all above mentioned work steps (regions, environmental goals, assessment procedures, monitoring, concepts for measures) on the basis of selected components (e.g. sea grass and macrozoobenthos) from the point of view of the specialized field. Furthermore, on the basis of such case examples the opportunities and limits of harmonization could be illustrated and the interfaces where closer cooperation would make sense, such as with regard to monitoring or assessment, could be pointed out. Finally such a product could then be used as a basis of argumentation for the further official coordination process and could support this process as an example of 'best practice'.

Summary Table

The major aspects regarding the status of development of the national assessment procedures and information on the respective reference conditions are listed in the Table below. Further details, differentiated into quality component, type of waters and riparian Wadden Sea state, can be found in the report or in the respective original literature given there.

Table: Overview of status in development of classification tools (reference conditions, category boundaries) in the Wadden Sea countries (February 2007).

Quality components	NL	DE	DK
Macrozoobenthos Transitional waters	Three-level approach (NIOO) not yet finally negotiated	Different approaches in Weser (Küfog) and Elbe (AeTI) under consideration.	Not relevant
Main assessment parameters (metrics)	a. Ecosystem (relation biomass to primary production); b. Ecotope (occurrence and distribution of five ecotopes); c. Species (abundance, species number and composition, biomass)	a. Elbe: species composition, abundance categories b. Weser: Occurrence of ecotopes, indicator species	-
Reference condition	a. Macrozoobenthos biomass to primary production 1:10. b. Historical reference from 1900, mussel shoal area 200 ha c. Time series since 1978	a. Species specific eco-values, b. Ecotope size (1880) and historical species list (1880), recent data	-
Macrozoobenthos Coastal waters	Three-level approach (NIOO) not yet finally negotiated	Different approaches under consideration (AMBI, MaRBIT, NIOO), probably M-AMBI (presumably for a transitional period)	DKI index nationally finalized
Main assessment parameters (metrics)	Ecosystem (relation biomass to primary production); Ecotope (occurrence and distribution of five ecotopes); Species (abundance, species number and composition, biomass)	a. M-AMBI (proportion of species in relation to 5 main ecological groups, species richness and diversity) b. MaRBIT (species richness, abundance, proportion sensitive and tolerant taxa); c. NIOO (see NL)	M-AMBI (additional factors to compensate for low densities and species numbers)
Reference condition	(See transitional waters)	a. Species composition from recent years b. Specific species reference list for each ecotope	Combination of historical and recent data
Fish Transitional waters	Multimetric approach, some details had to be agreed on (<i>abundance</i>)	Multimetric approach, agreed on, (modifications for Eider/Ems in progress)	Not relevant
Main assessment parameters (metrics)	Species composition of characteristic ecological guilds. <i>The use of abundance and age structure of indicator species agreed in principle but values still under consideration</i>	Species composition of characteristic ecological guilds, Abundance and age structure of indicator species	-
Reference condition	Historical (species composition, approx. 1900) and recent data (species composition, abundance)	Historical (species composition, abundance approx. 1890-1920) and recent data (abundance, approx. 1984 – 2004)	-
Fish coastal waters	Not relevant	Not relevant	Not relevant

Table cont.

Quality components	NL	DE	DK
Macrophytes Transitional waters	Different classification tools for the different groups of macrophytes; the overall classification corresponds to the lowest of the three classifications	Different approaches in Elbe (Stiller) and Elbe, Ems and Weser (excluding Lower Weser) (Adolph et al. and Jaklin et al.) under consideration.	Not relevant
Main assessment parameters (metrics)	Macroalgae: coverage of red, brown and eulittoral green algae Seagrass: species composition, coverage, coverage intensity Salt marsh: species composition (distribution of vegetation zones and types, diversity, possibly evenness), coverage, proportion of species sensitive to currents	a) Species composition, relative abundance, possibly coverage, vegetation zones and vitality b) Different classification tools for the different groups of macrophytes Macroalgae: species composition of red and brown algae, coverage of eulittoral green algae Seagrass: species composition, coverage, coverage intensity, possibly biomass, vitality Salt marsh: species composition (distribution of vegetation zones and types, diversity, evenness), coverage, proportion of species sensitive to currents	-
Reference condition	Macroalgae and seagrass: expert judgement and recent data Salt marsh: historical reference (potential ref. conditions coverage) related to the period 1600-1800	a) historical and recent data b) Macroalgae: Species composition from 1870-1960, coverage of green algae from recent data (1994-2004) Seagrass: historical (1950) and later Salt marsh: historical (coverage, approx. 1750, proportion of species sensitive to currents), expert judgement (distribution of vegetation zones, coverage) and theoretical models (evenness)	-
Macrophytes Coastal waters	Different classification tools for the different groups of macrophytes; the three results are equally weighted combined into a final classification	Different classification tools for the different groups of macrophytes; the three results are equally weighted combined into a final classification	Classification tools for macroalgae
Main assessment parameters (metrics)	Macroalgae: species composition of red and brown algae, coverage of eulittoral green algae Seagrass: species composition, coverage, coverage intensity, relative abundance, Salt marsh: coverage, proportion of 6 characteristic vegetation zones	Macroalgae: species composition of red and brown algae, coverage of eulittoral green algae Seagrass: species composition, coverage, coverage intensity, possibly biomass, vitality Salt marsh: species composition (distribution of vegetation zones and types, diversity, evenness), coverage, proportion of species sensitive to currents	Coverage by macroalgae. Angiosperms: The selected metric is 'depth limit of eelgrass'
Reference condition	Macroalgae and seagrass: expert judgement and recent data Salt marsh: historical reference (potential ref. conditions-coverage) related to the period 1600-1800	Macroalgae: Species composition from 1870-1960, coverage of green algae from recent data (1994-2004) Seagrass: historical (1950) and later Salt marsh: historical (coverage, approx. 1750, proportion of species sensitive to currents), expert judgement (distribution of vegetation zones, coverage) and theoretical models (evenness)	Site-specific reference models based on long-term historical (since 1900) and recent data

Table cont.

Quality components	NL	DE	DK
Phytoplankton Transitional waters	Approach to assess eutrophication	Not relevant	Not relevant
Main assessment parameters (metrics)	1. Concentration of chlorophyll a as the main parameter 2. Natural blooms of <i>Phaeocystis</i> as a subordinate parameter	-	-
Reference condition	Historical data, model-based, expert agreement, marine conventions (OSPAR),	-	-
Phytoplankton Coastal waters	Approach to assess the eutrophication, Chlorophyll a agreed	Approach to assess the eutrophication, Chlorophyll a agreed but all in all under consideration	Approach to assess the eutrophication, Chlorophyll a agreed, method for secchi depths and total nitrogen (TN) concentrations needs further development
Main assessment parameters (metrics)	1. Concentration of chlorophyll a as the main parameter 2. Natural blooms of <i>Phaeocystis</i> as a subordinate parameter	Mean chlorophyll a, max. chlorophyll a, biovolumes of Bidduphiales, Natural blooms of <i>Phaeocystis</i> , other indicators still under consideration	Chlorophyll a, biomass, total nitrogen (TN)
Reference condition	Boundary values derived from historical data, model-based, expert agreement, based on marine conventions (OSPAR)	Boundary values derived from single historical data, model-based, statistic analysis, expert agreement.	Boundary values based on historic conditions derived from total nitrogen (TN)
Phytobenthos Transitional waters	Not relevant	Not finished, but in all probability judged as not feasible	Not relevant
Main assessment parameters (metrics)		Species composition, abundance of diatoms and other phytobenthos in the intertidal zone	Not relevant
Reference condition		Near-natural conditions derived from expert agreement and recent data	
Phytobenthos Coastal waters	Not relevant	Not relevant	Not relevant