

POLICY ASSESSMENT REPORT 2005

**Tenth Trilateral Governmental Conference
on the Protection of the Wadden Sea**

Schiermonnikoog, November 3, 2005

Common Wadden Sea Secretariat

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1. Scope of the PAR

The Policy Assessment Report (PAR) gives an analysis of the progress that has been made in the past period since the Governmental Conference in Esbjerg 2001.

The background information upon which this analysis is based is contained in the 2004 Quality Status Report, which is a scientific analysis of the Wadden Sea ecosystem, and the Joint Progress Report, which contains an overview of the national and trilateral policies on the implementation of the Wadden Sea Plan and the Esbjerg 2001 Declaration.

The report of the Wadden Sea Forum has also been taken into account.

In addition, the recommendations of the 11th International Scientific Wadden Sea Symposium in Esbjerg 2005 have been taken into consideration.

The aim of the PAR is to give recommendations on activities of the Trilateral Cooperation in the forthcoming period after the 10th Trilateral Governmental Conference in Schiermonnikoog on 3 November 2005.

2. Status of the Wadden Sea Ecosystem and Assessment

2.1 Major achievements and trends

The 2004 QSR revealed that much has been achieved in the past decades with regard to improving the quality of the Wadden Sea ecosystem by working towards the Targets of the Wadden Sea Plan. It is noted that for the first time an operational common TMAP data handling system was available. The QSR also illustrated the indispensable value of long-term series for the assessment of trends.

The input of nutrients and other contaminants decreased resulting in decreasing phosphate concentrations, chlorophyll levels and organic matter input in the Wadden Sea and decreasing contaminant concentrations in the sediments and biota in most parts of the Wadden Sea.

An increase in area of natural and semi-natural salt marshes was observed caused by reduction or phasing out of grazing and artificial drainage, and by outbanking of summer polders.

The Tidal Area is still characterized by a high degree of natural dynamics; the area of natural mussel beds increased in the Dutch Wadden Sea and seagrass beds are beginning to recover.

The quality of habitats has increased in the last decades resulting in, e.g., an increase of breeding bird populations in salt marshes such as common red shank. The harbour seal population is healthy and viable, even after the 2002 phocine distemper epidemic, and a growth of the grey seal population was observed.

Thus, the QSR gives some reason to be optimistic, but there is also cause for concern which should be in the management and policy focus in the forthcoming years. The following chapters, structured according to the Targets of the Wadden Sea Plan, focus on these aspects. An overview of the evaluation of the Targets is given in Annex 1.

2.2 Landscape and culture

The Lancewadplan Project commenced in 2004 based on the extensive inventory of the landscape and cultural heritage in the wider Wadden Sea Region made in the framework of the Lancewad-project in 1999-2001. The current project is co-financed by the Interreg North Sea Program. The objective of the Lancewadplan project is to elaborate a draft Integrated Landscape and Cultural Heritage Management and Development Plan for the Wadden Sea Region with the following key elements: an overall integrated policy and management strategy within which a cultural landscape plan ("cultural environment atlas"), sectoral and theme plans, and a common action program will be elaborated. The project further aims to

reinforce and extend the trilateral network and the relationship with the Wash beyond the project period.

The Lancewadplan project is important to raise the understanding of the landscape and cultural heritage of the region to a level which is comparable with the natural environment level. The project results should serve as an input to updating the Wadden Sea Plan to ensure that its results are anchored in the trilateral framework.

2.3 Quality of water and sediment

a. Eutrophication

Though input of nutrients, especially of phosphate, has decreased, the entire Wadden Sea still has to be considered an eutrophication problem area, meaning that the target of a Wadden Sea which can be regarded as "eutrophication non-problem area" has not yet been met. Regional differences observed indicate a more intense eutrophication in the southern as compared to the northern Wadden Sea.

In order to meet the Target, continued effort is necessary to effectively implement current policies to reduce nutrient inputs; special effort is necessary with regard to nitrogen compounds.

The current policies within framework of OSPAR and the North Sea Conferences, and the EC Urban Wastewater and Nitrogen Directives are supported by the EC Water Framework Directive and the new EU Agriculture Policy. In all three countries, these policies are being implemented together with national measures and programs in order to reach the Target.

b. Hazardous substances

For some metals, the Target of background concentrations in sediment and biota (blue mussels and bird eggs) has not yet been reached in all sub areas of the Wadden Sea. For a number of xenobiotic compounds discharges to and concentrations in the Wadden Sea have decreased; however, the target has not yet been reached. Some of these substances still pose a risk to the ecosystem. Many newly developed xenobiotics, including hormone disruptors, have a wide occurrence in the Wadden Sea ecosystem, and may have deleterious effects on the ecosystem.

Policies for the reduction of hazardous substances, especially from riverine inputs as the quantitatively most important source, should be continued and special attention should be given to newly developed xenobiotics. Special emphasis should be given to the harmonized implementation of the relevant EC Directives on this issue.

c. Oil and seabirds

Reported oil spills off the German and Dutch coast declined in comparison to the 1990s. However, the major source of oil pollution at sea is illegal discharges of fuel oil residues due to operational processes on board, which has caused a constant threat to seabirds. A large proportion of seabirds washed onto beaches are contaminated with oil. Oil rates among beached birds of specific species of up to 90% in the 1980s have generally decreased further, but are still high.

The further implementation of policies and actions to prevent oil pollution from shipping - both from illegal discharges and from accidents - as well as control and enforcement measures therefore needs to be continued. The establishment of the Wadden Sea PSSA in 2002 can be regarded as a milestone to support these policies.

2.4 Salt marshes

Much has been achieved over the last decades to implement the Targets for salt marshes. A further increase of the area of natural salt marshes, an increased natural morphology and dynamics, and an improved natural vegetation structure of artificial salt marshes can be reached by further cessation of intensive grazing, reduction of artificial drainage in salt marshes without any agricultural use, and de-embankment of summer polders.

Although different management tools are applied in different parts of the Wadden Sea, the direction of salt marsh management can be regarded as a common one towards the Targets. Salt marsh management plans have been elaborated or are in preparation for parts of the Wadden Sea to harmonize the interest between nature protection and coastal defense. The assessment of the Target of a more natural vegetation structure requires further data analysis based on harmonized criteria. It is recommended that such a Wadden-Sea-wide harmonized assessment of salt marsh development should be carried out which can also be applied for the EC Habitats Directive. The newly developed common TMAP vegetation typology may be a valuable tool in this assessment.

2.5 The Tidal Area

The Tidal Area of the Wadden Sea is characterized by a high degree of natural dynamics. However, although only limited information is available to assess the Target of an “increased area of geomorphologically and biologically undisturbed tidal flats and subtidal areas”, the loss of high mud flats, which are essential for bivalve settlement, raises concerns.

For subtidal habitats, only limited information is available, which, however, already highlights the importance of these habitats in the Wadden Sea ecosystem. Policy and management should be aware of the sensitivity of these habitats and give more attention to protect them. To extend the knowledge and support future management measures, a study should be undertaken into these aspects, especially regarding changes in the amount and nature of tidal flats and subtidal areas and its various habitats.

Sabellaria reefs are extremely rare in the Wadden Sea today and only very few recent reefs are known. Although Sabellaria is listed in the EC Habitats Directive there is not enough actual data to assess the recent status and distribution of this ecological important habitat. A trilateral survey should be initiated to explore the occurrence of existing and former reefs in the Wadden Sea Area and the reefs should be protected against destruction and further deterioration.

Sea grasses are still unevenly distributed with a major occurrence (over 90%) in the northern Wadden Sea. The long-term decline of sea grasses in the southern and central Wadden Sea seems to have come to a halt, but some slow recovery is only partially evident. Given the diminished and, in some areas, still endangered state of sea grasses, existing and potential sites of seagrass beds should be protected from negative effects such as shellfish fisheries.

Natural development of intertidal blue mussel beds occurred as a result of consecutive spatfalls and large areas exempt from fishery for seed mussels. Regional differences in mussel bed development occurred mainly due to differences in spatfall and recruitment, for which the reasons are not well understood. Poor recruitment in the last years has caused a decline, especially in those areas where negative impacts from storms and ice cover or in case of fishing activities mussel fishery occurred.

Progress was made with the protection of young mussel beds at old (stable) sites of mussel beds, and that effort should be continued. Because of the high biodiversity and presumed ecological importance of subtidal mussel beds, substantial investigation effort is needed to document the location and extent of these mussel beds in the Wadden Sea and their structure and function in order to evaluate the requirements of a trilateral protection regime for stable subtidal blue mussel beds. Subtidal and intertidal beds should also be considered as a biological quality element in the implementation of the EC Habitats and Water Framework Directives.

Alien species can have negative impacts on resident Wadden Sea populations, for example hybridization by the neophyte cord grass (*Spartina anglica*) and colonization of natural mussel beds by the Pacific oyster (*Crassostrea gigas*), although most of the over 50 “new”

species entered the Wadden Sea ecosystem without having any known direct negative impact. However, a single introduced species may be able to cause severe ecological changes, economic damage or be a threat to human health. Therefore, adaptations in management may be necessary with the effect to avoid any further introduction of alien species. Monitoring programs are necessary to deliver the necessary information for management and should be adapted to enable an assessment of the effects of already introduced species like the cord grass and the Pacific oyster.

Fish populations play a decisive role in the Wadden Sea food web. A number of North Sea fish species use the Wadden Sea as nursery area. However, information about distribution and development of fish species in the Wadden Sea is fragmentary, especially for pelagic and migratory (diadromous) fish species.

For threatened diadromous fish species further conservation effort is required, e.g. sluice and dike passage facilities and upstream habitat restoration.

The formulation of trilateral targets regarding fish, tuned to the requirements of the relevant EC Directives, will structure and focus management and monitoring of this important faunal group in the Wadden Sea.

2.6 Beaches and Dunes

The Targets of increased natural dynamics and of an increased presence of a complete natural vegetation succession have not been reached yet. About two-thirds of dunes consist of mid-successional dune types; important other types, e.g. embryonic dunes and species-rich dune slacks, are not present or show a further decline.

In areas where coastal defense measures have been reduced natural dynamics have increased.

Eutrophication from atmospheric deposition has caused dense grass vegetations to develop and on some of the islands, species-rich dune slack vegetations have degraded due to groundwater extraction.

The newly developed classification system for beaches and dunes should be applied to carry out a trilateral assessment of dunes development including a data collection regarding atmospheric deposition, coastal protection measures and water management.

The Coastal Protection and Sea Level Rise working group (CPSL) has investigated best environmental practices for coastal protection. The CPSL concludes that the predicted sea level rise will induce a sediment deficit in the Wadden Sea. Above breakpoint, the Wadden Sea will develop into a number of tidal lagoons.

A main recommendation is that coastal spatial plans that include buffer and coastal flood hazard zones should be established based on the principles of integrated coastal zone management. Coastal defense and climate change should be duly considered in this regard. A further recommendation is that sand nourishment should be applied, wherever feasible, to combat erosion along sandy coastlines. The implementation of these recommendations into trilateral policy in the framework of the Wadden Sea Plan is essential.

2.7 Estuaries

The estuaries of Ems, Weser and Elbe fail to meet the Target. Significant changes of the ecosystems of these estuaries occurred, as have been documented in the 2004 QSR and the WFD reports published in March 2005.

Large parts of the Wadden Sea estuaries have been nominated as NATURA 2000 areas for which a favorable conservation status has to be achieved. Further effort will be necessary to implement the Target.

There are only few natural transitions between fresh and salt water. Progress on modifying sluice regimes, building fish passages and restoration of salt marshes increased the opportunities for species and habitats depending on natural transition zones between fresh and salt water. It is recommended to further detail the Target for estuaries taking into account, amongst others, possibilities to restore gradients between fresh and salt water. The

development of management plans for transitional waters, as required by the EC Water Framework Directive, is an opportunity in this respect.

2.8 Offshore Area

(The Offshore Area is trilaterally defined as the area between the baseline and the offshore border of the Wadden Sea Area (up to 3 resp. 12 sm), see map Annex 2).

The Offshore Area and the Tidal Area are closely connected both from the physical and biological perspectives. Bivalve stocks in the Offshore Area are important as a food resource for common scoter, eider and other diving ducks. For the eider, *Spisula subtruncata* stocks in the Offshore Area are an essential escape during adverse conditions in the Wadden Sea. The Offshore Area is also important for a number of species (e.g. marine mammals) and habitats protected under the EC Birds and Habitats Directives.

Plans for the construction of offshore wind farms exist, most of them being outside the Wadden Sea Area. Possible impacts on species and habitats in the Wadden Sea Area and the North Sea especially cumulating effects as well as impacts on shipping safety are currently being investigated. If negative impacts are to be expected this would demand adaptations in policy and management.

The various developments in the Offshore Area and the adjacent North Sea area should be followed and more attention should be given to a proper management of the different human activities, e.g. fisheries, shipping and wind farms in the Offshore Area.

2.9 Birds

a. Breeding birds

For common eider and oystercatcher, food conditions have not been favorable due to, amongst others, shellfish fisheries, causing a decline of the breeding population. The favorable availability of food is further constrained by the occurrence of severe winters, which increases winter mortality. Previously, oystercatcher numbers were able to recover from severe winters, but since the mid 1990s they have remained at low population levels. Breeding numbers of great ringed plovers and kentish plover have continued to decline due to recreational pressure in all parts of the Wadden Sea, in contrast to little tern. Although progress has been made by implementing appropriate protection measures in several beach and dune areas, these measures have not yet been successful in all places, because they are only effective if taken on a scale large enough to cover an important part of the potential breeding range.

Implementation with urgency of further effective measures to protect beach-breeding birds is necessary, as well as the continuation of those measures already initiated in all areas of the Wadden Sea.

A more effective conservation of shellfish stocks in the Dutch Wadden Sea is necessary to ensure favorable food conditions for benthos-eating birds (the new Dutch shellfish fisheries policy commencing in 2005 is expected to contribute substantially).

Introduction of human-influenced settlement of mammalian predators to the islands and Halligen should be prevented to maintain the current relatively predator-free breeding sites of coastal waders and colony-breeding species.

Regarding many other species the knowledge about reproduction rates, mortality rates and habitat requirements should be improved to be able to explain the observed trends and to better evaluate management measures. This was also reflected in the recommendations of the International Scientific Wadden Sea Symposium in Esbjerg, April 2005.

b. Migratory birds

An analysis of trends of migratory birds utilizing the Wadden Sea reveals that 22 out of 34 species had to put up with declines during the period from 1992 to 2000, of which 15 are statistically significant. However, regional differences were obvious and sometimes different trends in different parts of the Wadden Sea were found for the same species. It is recommended to have more recent data available for the trend analysis.

The trends in the different Wadden Sea countries should be investigated in more detail and be related to the differences in policies and management. This should provide an insight into potential management-related causes behind the observed population changes, e.g. the causes of the observed decreasing trends in migratory bird species feeding on bivalves and other benthos. The whole range of the birds' flyway including possible causes for decline located outside the Wadden Sea should be taken into account.

Continued attention to the conservation of shellfish stocks to ensure favorable conditions for benthos-eating migratory birds is necessary.

Despite the extensive protection regimes now covering major parts of the Wadden Sea and the majority of roosting sites, the actual status regarding high tide roosts is not satisfactory. Potential conflicts relate especially to outdoor recreation as well as impacts from air traffic or wind farms. The existing protection schemes should therefore be continued and extended where necessary. Further development of spatial and temporal zoning of recreational activities as well as a convincing visitor information system in order to reduce conflicts between roosting birds and recreational activities is necessary. More information concerning natural flight distances is required to manage public access to areas in the vicinity of roosting sites and for a better protection of moulting sites. Trilateral surveys of moulting concentrations of seaduck species are necessary to develop appropriate conservation measures.

2.10 Marine Mammals

Harbour seal, grey seal and harbour porpoise are species included in Annex II of the EC Habitats Directive.

a. Harbour seal and grey seal

After a successful recovery from a PDV-epizootic in 1988, the harbour seal population in the Wadden Sea was struck again by a seal virus (PDV) in 2002. In 2003, numbers were only 47% of those that could have been expected if no epizootic had occurred. Total pup production in 2003 was higher than before the epizootic and it is expected that the demographic population structure will gradually return to a stable composition. However, it is essential to continue close monitoring of the population to assess the recovery from its depleted size.

According to recent satellite telemetry it has to be concluded that the harbour seals of Wadden Sea use the North Sea to a much larger extent than thought before. It is therefore considered of importance to intensify studies focusing on foraging ecology to identify critical habitats for this species in the North Sea, also in view of the increasing human exploitation of marine waters such as by offshore wind farms.

The harbour seal population in the Wadden Sea is considered to be viable with a satisfactory reproduction capacity and rate.

The grey seal population in the Wadden Sea is growing, to some extent caused by influx from colonies in the United Kingdom. Outside the reproductive colonies in the Dutch and Schleswig-Holstein Wadden Sea, signs of population expansion to other areas (Niedersachsen and Helgoland) were observed. There is insufficient data and knowledge to judge whether the grey seal population in the Wadden Sea is viable or has a natural reproduction capacity and rate.

To improve conservation and management of the populations of harbour seal and grey seal the management, research and monitoring actions of the adopted Seal Management Plan (SMP) 2002 - 2006 should be implemented. These actions relate to habitats, pollution, wardening, research and monitoring, taking and exceptions for taking and public information. The SMP has been adopted for the period 2002 – 2006 and is currently being implemented. Special attention should be given to the issue of reporting of data.

Grey seal studies should be initiated in order to obtain data essential for designing appropriate management measures.

An evaluation of the SMP should be carried out in 2006 whilst also considering a tuning of the time schedules of the SMP and Trilateral Governmental Conferences.

b. Harbour Porpoise

The Offshore Area and adjacent North Sea, especially off Schleswig-Holstein, is important for the harbour porpoise. Only limited information is available to assess whether the population is viable or has a natural reproduction capacity and rate. Management and monitoring should be carried out in a North Sea wide framework.

All three countries contribute to the implementation of the SCANS II-project, aiming at estimating populations of small cetaceans in the European Atlantic and the North Sea through coordinated surveys until 2006.

With regard to protection and management of cetaceans in European waters the Council Regulation (EC) No 812/2004 of 26 April 2004 has laid down measures concerning incidental catches of cetaceans in fisheries.

Within ASCOBANS a recovery plan for harbour porpoise in the North Sea is in preparation. The proposed mitigation measures and recommendations to support the recovery of harbour porpoise deal with the reduction of by-catch (recommending stricter measures for the North Sea than laid down in the EC Regulation), noise pollution and disturbances, the effects of pollution, the establishment of protected areas, research, monitoring and the raising of public awareness. As members of ASCOBANS, the Wadden Sea countries contribute to the elaboration of the recovery plan.

Under the EC Habitats Directive special areas of conservation (SAC) have been proposed to protect harbour porpoise habitats to be included into the Natura 2000 network.

3. How to proceed

3.1 Status of trilateral policy and management

The Joint Progress Report (JPR) provides a detailed overview of the implementation of the Esbjerg Declaration and the Wadden Sea Plan. On the basis of the JPR it can be concluded that the large majority of the agreements of the Esbjerg Declaration has been implemented on the relevant levels by the competent authorities. The Wadden Sea Plan continues to constitute the overall policy and management framework and is implemented on the relevant levels of government. Together with the recent QSR 2004, the JPR provides us with a comprehensive basis for determining what progress has been made and what should be done with priority in the forthcoming period.

Policy

Prior to the 2001 Conference, the German National Parks Laws were all amended to include a larger conservation area and a more comprehensive protection system. This is also reflected in the extension of the Wadden Sea Area and the Conservation Area at the Esbjerg Conference. The extension of the Man and Biosphere (MaB) Reserve in Schleswig-Holstein in 2004 by including the large Halligen as a transition zone and the decision of the Niedersachsen Government to start the discussion on the development of such a zone in the Niedersachsen Wadden Sea region give further opportunity for a closer integration of nature conservation and regional development.

Since 2003, a pilot project has been initiated in the Danish part of the Wadden Sea to explore with the local population whether the Danish Wadden Sea can be designated as a national park. This project is part of a nation-wide number of pilot projects to investigate whether national parks should be introduced in Denmark as a nature conservation initiative.

In the Netherlands, a Wadden Sea Commission - the "Commission Meyer" named after the chairman - was installed by the government to examine a number of critical political issues, namely gas exploitation and shellfish fishery in the Dutch part of the Wadden Sea, to provide proposals for solving these issues while at the same time advise on how the Wadden Sea natural values can be maintained and improved. This has resulted in the decision by the government to allow the exploitation of gas from locations outside the Wadden Sea provided that significant effects on the Wadden Sea itself can be avoided, to ban mechanical cockle fishery, and in order to strengthen the Wadden Sea management and the regional development to make available a Wadden Sea fund of 800 million Euro for such initiatives.

EC Directives

In the period since the Esbjerg Conference 2001, the large majority of the Wadden Sea Area has been listed as habitat areas according to the EC Habitats Directive supplementing the designation as Special Protection Areas in accordance with the Birds Directive. There are still a number of areas in discussion in the estuaries both within and outside the Wadden Sea Area. The European Commission has informed the Wadden Sea states of the approved lists of Sites of Community Importance. This basically concludes the nomination process which had been addressed at consecutive Wadden Sea Conferences since 1994. As a result almost the entire Wadden Sea Area will be part of Natura 2000.

Together with the implementation of the EC Water Framework Directive this inaugurates a new period in which emphasis will be laid on the implementation of the various directives. The Wadden Sea has now been preliminarily designated as a natural water body commonly by all states based on the high degree of natural dynamics in the Wadden Sea. In 2009 management plans for the various river basin districts to which also the Wadden Sea belongs will become into force.

Monitoring

In accordance with the Esbjerg Declaration the Trilateral Monitoring and Assessment Program (TMAP) has been subject to a review as to whether it meets the monitoring requirements ensuing from the EC Habitats, Birds and Water Framework Directives. The conclusion is that the TMAP is fully within the current requirements but a completion may be necessary to meet all EU requirements.

The TMAP data handling system has been evaluated by the Canadian Orbis Institute. The review by Orbis concluded:

“There are many positive aspects to the underlying technical approach that has been taken for TMAP Data Handling. The use of a common relational model, incorporation of a catalogue level of information, and adoption of a database extension to use in managing the user interface are all sound design decisions.

The cost efficiency of the development is assessed as good. There is no evidence of poorly controlled or excessive expenditure. The intermittent nature of the work at Data Units has caused some inefficiency due to losses of continuity and reduced opportunity for synergies between Units, but in summary, much has been successfully achieved at a reasonable cost. Costs compare favourably to other international situations.

The technical concept of TMAP-DH with its “database extension” allows for the introduction of new parameters or adjustments to existing content with relative ease.”

The data handling has contributed to the preparation of the QSR 2004

The ongoing TMAP revision process is well acknowledged and should incorporate the relevant recommendations of the International Scientific Wadden Sea Symposium in Esbjerg, April 2005. The TMAG has reviewed these recommendations leading to prioritized messages (see Annex 3).

The developments in terms of new policies and management, which have developed on the regional level, call for a further development of the Wadden Sea Plan within the Shared Vision, Principles and Targets in the coming period. This is underlined by the conclusions of the QSR 2004 as outlined in chapter 2. This also calls for a detailed analysis of the conclusions and recommendations with regard to the existing policies and management activities; this analysis has not yet been done. Such a procedure will also require a comprehensive time period for discussions and consultations.

Wadden Sea Forum

The Wadden Sea Forum (WSF) has focused on developing a sustainable development strategy for the Wadden Sea Region. This WSF process is so far the most extensive consultation process launched in a trans-boundary context in this region. Issues of special concern for the Wadden Sea Forum have been the overarching issues of infrastructure, shipping safety and coastal defence and the sectors of agriculture, fisheries, industry and harbours, tourism and recreation and energy including the planned extension of the offshore wind energy and the cable planning. The WSF recommendations basically aim at improving on a long-term basis the social, economic and environmental conditions in the entire Wadden Sea Region with the inhabitants. The Wadden Sea Forum puts again forward the issue of the differences in implementation of the EC Directives in the three Wadden Sea states, such as the EIA Directive.

The WSF strategy can be considered as an additional strategy to the Wadden Sea Cooperation protection and management scheme, providing an important contribution to the development of an Integrated Coastal Zone Management Strategy for the entire Wadden Sea Region. As the WSF in its vision stated, the trilateral Targets represent the ecological objectives for the Wadden Sea Area and are respected by all sectors. The improvement of the social and economic development of the region can also be considered in the interest of the Trilateral Cooperation in order to contribute to a sustainable development. In addition to its final report the WSF has provided an Action Plan to prioritize and implement the strategies.

Shipping Safety

Transport of goods by ship constitutes a very environmental friendly way of transport. At the same time it is acknowledged that in the case of an accident the consequences for the Wadden Sea Region can be immense. In order to raise awareness regarding the vulnerability of the Wadden Sea, the area has been designated as a Particularly Sensitive Sea Area (PSSA) by the IMO in 2002 which can be regarded as a milestone. The effectiveness of this designation should be reviewed in an appropriate time frame also taking into account the aspect of level playing field.

The general risk and potential consequences of accidents and the PSSA designation lead to the obligation to maintain and where necessary enhance shipping safety and impacts from shipping on the Wadden Sea.

Shipping and shipping safety is considered as one of the priority issues for the Wadden Sea Region. This concern has also been raised in the Wadden Sea Forum leading to 35 recommendations concerning policy and management necessities. These recommendations were reviewed in conjunction with the agreements taken at the Esbjerg Conference. Action is needed at both the trilateral and international level. Wadden Sea specific actions should be focused on:

- spatial planning in the EEZ,
- day-to-day joint cooperation in the framework of the DenGerNeth plan,
- appropriate towing and pollution response capacity,
- the practical implementation of Places of Refuge,
- harmonization of the no-special-fees system,
- aerial surveillance in the relevant coastal areas and the EEZ.

Coastal Protection and Sea Level Rise

The working group on Coastal Protection and Sea Level Rise (CPSL) concludes that there are possibilities to improve the practices to limit the impacts on the natural values from coastal protection though it should be recognized that coastal protection will always constitute an interference with the natural values of the area. In light of the sea level rise and climate changes it is important to consider such techniques in a trilateral context to maintain the values for the whole system as such.

World Heritage

The consultations on the nomination of the Wadden Sea as a World Natural Heritage site have been continued. The nomination itself will not introduce any new measures but will be a conclusion and recognition of a generation of efforts to protect the Wadden Sea and use its resources in a sustainable way. In this sense, it will constitute the first common nomination and as such reinforce common commitment for the area, as e.g. expressed in the Wadden Sea Plan.

As requested by the UNESCO Guidelines, this commitment, as well as the further nomination process has to be supported by the people living in the Wadden Sea region.

International Perspectives

Beside international conventions like Ramsar and CMS/AEWA, the discussion on the World Heritage site nomination and the findings of the QSR in particular with regard to migratory birds draw attention to the international linkages of this area with areas on the bird's flyways. Many of the problems which management faces, e.g. in terms of managing bird populations must be and in many cases can be more effectively addressed on a global level. The cooperation with areas from the arctic and West Africa is therefore of major interest for the management of the Wadden Sea while at the same time use can be made of the experiences gained on a more global level.

International Wadden Sea School (IWSS)

The importance of education for a sustainable development has been recognized in the Trilateral Cooperation, as well as in the final report and the action plan of the WSF. In the framework of the trilateral cooperation a two year pilot phase for an IWSS has been carried out successfully in cooperation with NGO's. A concept for trilateral education was tested and evaluated valuable. This provided a proposal for an IWSS implementation phase.

3.2 The Way Forward

Based on the assessment in the previous chapter, there are two central issues to be addressed at the Schiermonnikoog Conference with a view to improve the protection and sustainable development of the Wadden Sea Region and the cooperation between the states. They will also determine the work for the forthcoming period: namely focusing the Wadden Sea Cooperation and supporting the sustainable development of the Wadden Sea Region.

Focusing the Wadden Sea Cooperation

The developments in terms of the European legislation with regard to environment protection call for looking at the coordinated implementation of the stipulations of the directives in order to ensure that the Wadden Sea is protected and managed in a coherent way consistent with the Joint Declaration which is the basis of the Wadden Sea Cooperation. This should be done in conjunction with the conclusions and recommendations of the QSR 2004, the relevant recommendations of the WSF report and international conventions such as Ramsar and CMS/AEWA. The recommended way forward in this regard is to link the Wadden Sea Plan to the management plan requirements of Natura 2000 and the Water Framework Directive.

The current Wadden Sea Plan (WSP) entails the politically adopted Guiding Principle, Management Principles, the Targets and the geographically defined Wadden Sea Area and Conservation Area. To a large extent the WSP can already be considered consistent with the inherent requirements of the EC Habitats, Birds and Water Framework Directives but it needs to be further developed. What is needed are linkages between favorable conservation status respectively the good ecological status and the Targets and a review of the implications together with the conclusions and recommendations of the QSR. This will strengthen the cooperation in implementing the EC Directives for the Wadden Sea in a coordinated and consistent way which is the intent of the Joint Declaration. The process towards further development of the Wadden Sea Plan must be supported by a communication and consultation process to ensure that the further development has the commitment of the competent authorities and the wider community. This should also be in line with the EU ICZM recommendations.

The TMAP already covers many but not all of the requirements in terms of monitoring ensuing from the above mentioned EC Directives. The ongoing TMAP revision process will recommend on the issue how the existing TMAP program can fulfill the monitoring requirements of the Wadden Sea Plan and the EC Directives.

The TMAP data handling system should ensure an effective handling of the data for assessment and should therefore be continued and further optimized. This will also continue to guarantee the elaboration of regular QSRs in future.

The preparation of the nomination procedure as World Heritage Site and the elaboration of the formal application documents have to be done in close collaboration with all interested parties such as those municipalities, counties, states and nations, which have positively decided on the nomination maintaining the chance for other regions to join the process.

In the context of focusing our Cooperation the issues of the construction of wind turbines and shipping safety, which are considered of high importance also by the regional communities, should be addressed. The forthcoming conference should give overall guidance in this regard to ensure that the ongoing developments are addressed.

Supporting Sustainable Development

Besides the protection of the Cooperation Area the sustainable development of the Wadden Sea Region has become of increasing importance over the last decade.

Based on the Guiding Principle and the Wadden Sea Plan, the WSF has contributed valuably to a sustainable development strategy.

Therefore, the WSF can develop to be a partner for implementing a sustainable development strategy in the framework of ICZM in the Wadden Sea Region. It is therefore a prerequisite to develop a common set of sustainability indicators.

To be successful all major stakeholders in the region, governmental and non-governmental, should be involved in this process, acknowledging the protection status of the Wadden Sea.

In this context, the recommendations of the WSF final report and initiatives of its Action Plan, which are relevant for the Trilateral Cooperation, should be reviewed in line with the further development of the Wadden Sea Plan within the Shared Vision, Principles and Targets.

The recommendations and actions, which go beyond the competence of the Trilateral Wadden Sea Cooperation should be forwarded to the competent authorities.

The WSF has the potential to improve the communication within the region. In that sense the WSF may turn out to be a powerful instrument for communication and consultation which is needed in a more complex management framework.

Education is a requirement to ensure long-term protection and sustainable development of the Wadden Sea Region. The IWSS has the potential to be established as provider of trilateral Wadden Sea education.

ANNEX 1 Summary of Target Evaluation

In the table below an overview is presented of the evaluation of the Targets of the Wadden Sea Plan (from: QSR 2004, chapter 15.10) To assist a quick overview, colored symbols have been used. These symbols should be interpreted in combination with the text of the evaluation. The meaning of the symbols is as follows:

- ▼ target not reached; development negative
- ▲ target not yet reached; positive development
- ▲ target reached, positive development
- ▼ target reached, negative development
- ? no target evaluation possible

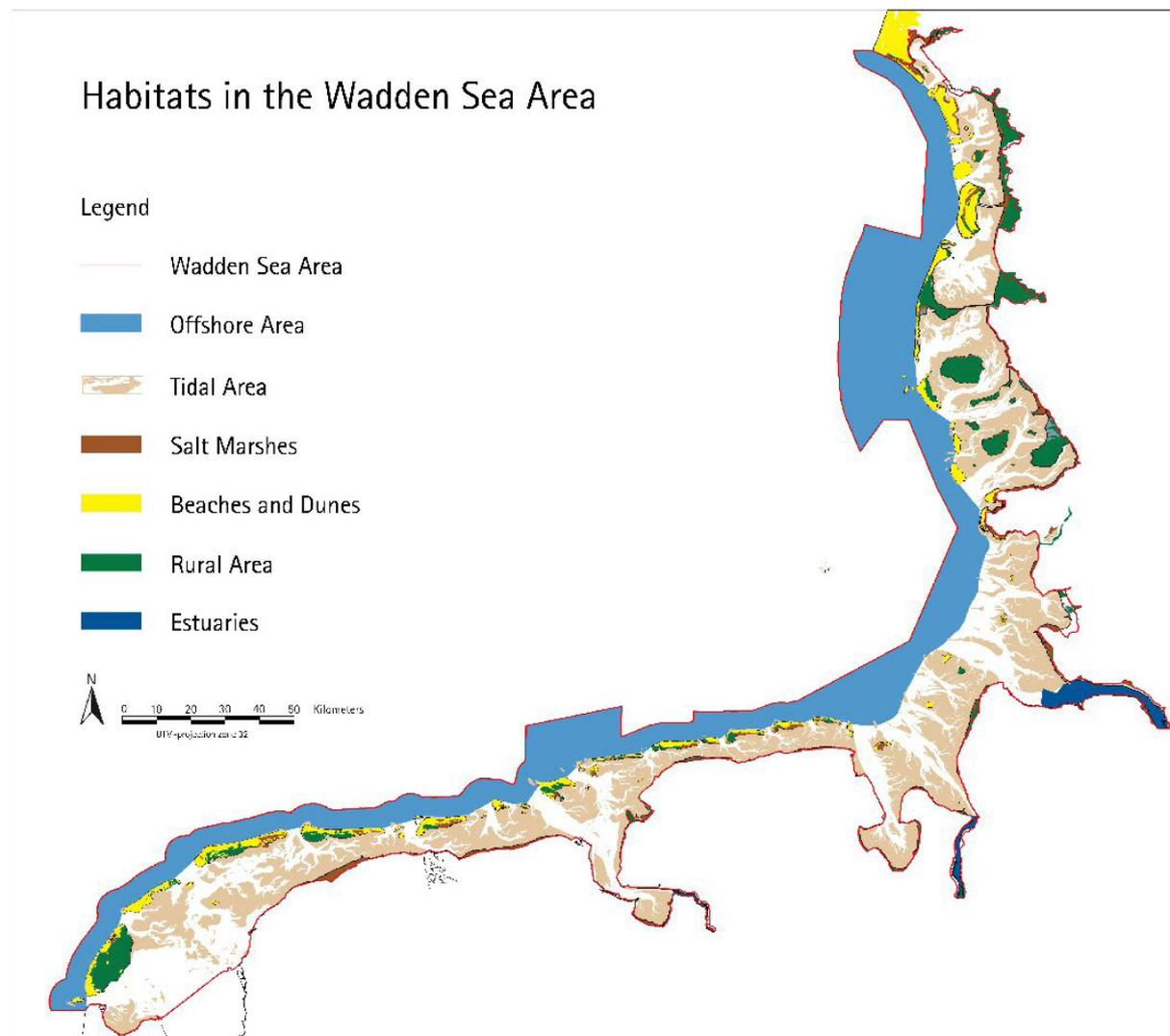
Issue	Target	Evaluation	
Nutrients & Eutrophication	A Wadden Sea which can be regarded as a eutrophication non-problem area.	▲	Though phosphate concentrations have decreased, the entire Wadden Sea still has to be considered a eutrophication problem area, meaning that the target has not yet been met.
Hazardous substances	<p>Background concentrations of natural micropollutants in water, sediment and indicator species.</p> <p>Concentrations of man-made substances as resulting from zero discharges.</p> <p>OSPAR EcoQO: The proportion of oiled common guillemots among those found dead or dying on beaches should be 10% or less.</p>	<p>▲</p> <p>▲</p> <p>▼</p> <p>▲</p>	<p>For metals in sediment the target has not yet been reached in all subareas of the Wadden Sea.</p> <p>For four metals concentrations in blue mussel do not yet meet target levels.</p> <p>Mercury in bird eggs does not yet meet target levels.</p> <p>Regarding Ecotoxicological Assessment Criteria accepted by OSPAR, concentrations in the Wadden Sea of mercury, copper, cadmium and PAHs do not pose a risk to the ecosystem, but zinc and lead still do.</p> <p>For PAHs in sediment, no natural background level has been documented. Concentrations are lower than in the Skagerak, and higher than in Barents Sea sediments.</p> <p>Although for a number of xenobiotic compounds discharges to and concentrations in the Wadden Sea have decreased, the target has not yet been reached.</p> <p>For some substances, e.g. TPT and Lindane, a significant deviation from the target is apparent.</p> <p>For PCBs, Lindane and TBT, the OSPAR ecological assessment criteria are exceeded in various Wadden Sea subareas.</p> <p>Of many newly developed xenobiotics, including hormone disruptors, concentrations have been found in the Wadden Sea, which is a deviation from the target.</p> <p>For the common guillemot, the OSPAR Ecological Quality Objective (EcoQO) of 10% oil rate has not been met.</p>
Salt marshes	An increased area of natural salt marshes.	?	In most areas of the Wadden Sea, an increase in area of natural and semi-natural salt marshes could be observed. An evaluation, of the target in quantitative terms is, however, not possible for the entire area because of insufficiently detailed older data.

Issue	Target	Evaluation	
	<p>An increased natural morphology and dynamics, including natural drainage patterns, of artificial salt marshes, under the condition that the present surface is not reduced.</p> <p>An improved natural vegetation structure, including the pioneer zone, of artificial salt marshes.</p>	<p>▲ ?</p> <p>▲</p> <p>▼</p>	<p>Artificial draining in salt marshes has been reduced. The remaining ditch systems, however, have not yet developed into natural-like creek systems.</p> <p>A precise evaluation of the target cannot be given because long-term data is only available for some regions and the developed common typology could not be applied to older data. Significant reductions of livestock grazing intensity in The Netherlands and Germany contributed to a more natural vegetation structure of artificial mainland salt marshes. In Denmark, the proportion of intensively grazed salt marshes did not change.</p>
Tidal area – hydrology/geomorphology and macrozoobenthos	<p>A natural dynamic situation in the Tidal Area.</p> <p>An increased area of geomorphologically and biologically undisturbed tidal flats and subtidal areas.</p>	<p>▲</p> <p>▲</p> <p>? ▼</p>	<p>The Tidal Area of the Wadden Sea is still characterized by a high degree of natural dynamics. There is no significant increase of constructions for coastal defense. Deviations from the target are existing coastal defense structures and deepening of channels for shipping.</p> <p>The target cannot be evaluated due to absence of proper information. The observed decline in bivalve recruitment and shift in their centers of distribution indicates a loss of previously biologically undisturbed tidal flats, in other words: a deviation from the target.</p>
Tidal area – biogenic structures	<p>An increased area of, and a more natural distribution and development of natural mussel beds, <i>Sabellaria</i> reefs and <i>Zostera</i> fields.</p>	<p>▼</p> <p>▲</p> <p>▲ ▲</p> <p>▲</p> <p>?</p>	<p>No increased area of <i>Sabellaria</i> reefs has been reported.</p> <p>The target of increased area of <i>Zostera</i> fields has not yet been met in all sub-areas of the Wadden Sea.</p> <p>The target of an increased area of natural mussel beds in the intertidal area was reached in the mid and eastern Dutch Wadden Sea. In the Danish and western Dutch Wadden Sea, no development according to the target occurred. In Niedersachsen, the actual area of mussel beds is the level present in the late 1980s, and in Schleswig-Holstein still below the level present in the early 1990s.</p> <p>In areas where there was no fishing, a more natural distribution and development of intertidal mussel beds occurred.</p> <p>With regard to the subtidal mussel beds, no evaluation of the target is possible yet.</p>
Tidal area – introduced species	- no target -		- not applicable -
Tidal area – fish and shrimps	<p>- no specific target –</p> <p>An increased area of geomorphologically and biologically undisturbed tidal flats and subtidal areas.</p>	?	<p>The target of undisturbed tidal flats and subtidal areas for fish and shrimps cannot be evaluated. The possibility of the observed shift in juvenile flatfish being related to a decreased area of undisturbed tidal flats and subtidal areas needs to be investigated.</p>

Issue	Target	Evaluation	
	An favorable food availability [for migrating and breeding birds].	▲	There is currently no evidence of food shortage among fish and shrimp eating birds.
Beaches and Dunes	<p>Increased natural dynamics of beaches, primary dunes, beach plains and primary dune valleys in connection with the Offshore Zone.</p> <p>An increased presence of a complete natural vegetation succession.</p>	<p>? ▲</p> <p>▲</p>	<p>The target of increased natural dynamics of beaches and dunes cannot be fully evaluated due to absence of criteria and of comparable relevant data; natural dynamics have increased where coastal defense activities were stopped; remnant coastal defense structures still remaining restrict increased dynamics.</p> <p>A complete natural vegetation succession is not present because about two-thirds of the dune areas consists of mid-successional dune type and important other types are not present or show further decline.</p>
Estuaries	Valuable parts of estuaries will be protected and riverbanks will remain and, as far as possible, be restored to their natural state.	▼	According to Water Framework Directive Reports 2005, most estuaries in the Wadden Sea Cooperation Area fail to meet the target.
The Offshore Zone	<p>An increased natural morphology, including the outer deltas between the islands.</p> <p>A favorable food availability for birds.</p> <p>Viable stocks and a natural reproduction capacity of the common seal, grey seal and harbour porpoise.</p>	<p>▲</p> <p>▲ (▼)</p>	<p>As far as available data shows, no major changes of natural morphology have taken place.</p> <p>Stocks of the bivalve <i>Spisula</i> constitute a favorable food source for diving ducks, provided fishing pressure on these bivalve stocks is low.</p> <p>- see under 'Marine mammals' -</p>
Breeding birds	Favorable conditions for [migrating and] breeding birds: - A favorable food availability - A natural breeding success	<p>▼</p> <p>▼</p>	<p>The target 'A favorable food availability' has not been met, especially for bivalve eating species in the Dutch Wadden Sea due to shellfish fisheries.</p> <p>The target 'A natural breeding success' has still not been met for beach-breeding species due to recreational disturbance.</p>
Migratory birds	Favorable conditions for migrating and breeding birds: - A favorable food availability - Natural flight distances - Sufficiently large undisturbed roosting and moulting areas.	<p>▲ ▼</p> <p>?</p> <p>▲</p>	<p>For bird species feeding on benthos/bivalves the target 'favorable food conditions' has not been met; for herbivorous birds this target has been met.</p> <p>The target 'natural flight distances' cannot be evaluated due to absence of relevant data.</p> <p>The target 'sufficiently large undisturbed roosting and moulting areas' has still not satisfactorily been met.</p>
Marine mammals	Viable stocks and a natural reproduction capacity of the common seal, grey seal and harbour porpoise.	<p>▲</p> <p>?</p>	<p>The population of harbour seals in the Wadden Sea can be considered viable with a satisfactorily reproduction capacity.</p> <p>The target regarding grey seal and harbour porpoise cannot be evaluated due to insufficient data and knowledge.</p>

ANNEX 2 Wadden Sea Habitat Map

Overview of Wadden Sea habitats according to the Wadden Sea Plan



ANNEX 3 TMAG Messages on Symposium Recommendations

MESSAGES REGARDING THE RECOMMENDATIONS OF THE 11th INTERNATIONAL SCIENTIFIC WADDEN SEA SYMPOSIUM, Esbjerg, 4 - 8 April 2005,

AS FORMULATED BY THE TRILATERAL MONITORING AND ASSESSMENT GROUP in its meeting in Hamburg on 30-31 May 2005 (TMAG 05/3)

- Message 1: Because of its added value to monitoring and assessment concomitant research deserves more attention. Results of concomitant research – inside as well as outside the Wadden Sea Cooperation Area - can be used in the design and optimization of monitoring programs, and are of importance for a proper assessment.
- Message 2: The present TMAP Common Package is limited. In the TMAP Revision process the parameter package and habitat coverage must be elaborated with a view to adequately serve the assessment objectives of the Wadden Sea Plan and also the monitoring requirements of the relevant EU Directives.
- Message 3: In the TMAP Revision process adequate attention should be given to further improvement and harmonisation of parameter measurement, including quality control of the data produced.
- Message 4: The TMAP data handling system needs to be further optimized to enable efficient dissemination of data and information. Structural funding of this system needs to be secured.
- Message 5 : In the TMAP Revision process various experts and expert groups should be involved to support the TMAG.
- Message 6: The EU Directives set specific preconditions for monitoring and assessment of the Wadden Sea ecosystem. This should be taken into account in the TMAP Revision process.