

# Wadden Sea Board

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The WSF has elaborated a draft ICZM strategy for the Wadden Sea Region. The strategy also includes the progress of the WSF and recommendations of the working group energy on CO<sub>2</sub> neutrality, of the working group shipping & harbour on shipping safety and of the goose management group (GMG) on accommodation of geese and conflict resolution. Particularly the results of the GMG are very preliminary, as final results will be available by end of October.

Furthermore, the WSF plenary has to adopt the draft ICZM strategy on its meeting on 31 October/1 November. The final version will be available at the WSB-10 meeting in December 2013.

## **Proposal**

The meeting is proposed to take note of the draft WSF ICZM strategy for the Wadden Sea Region and to consider amendments in the Ministerial Declaration according to the WSF results and recommendations.

## Wadden Sea Forum

# ICZM Strategy for the Wadden Sea Region

## Chapter 1: Introduction

### Background

The Wadden Sea Forum (WSF) is an independent platform of stakeholder organizations in the Wadden Sea Region (WSR) of Denmark, Germany and The Netherlands and started its work in 2002, following a decision by the 9th Governmental Conference of the Trilateral Wadden Sea Cooperation (TWSC) in Esbjerg:

"To convene, therefore, in accordance with the Terms of Reference in Annex 6, a Trilateral Wadden Sea Forum, as a consultation project, with the participation of the governmental and non-governmental stakeholders, with the task of developing proposals for sustainable development scenarios and strategies for their implementation, respecting the existing protection levels, and ensuring economic development and quality of life. This will be done on the basis of the Shared Vision, the Wadden Sea Plan Targets and the Shared Principles, and as a contribution to the further development of the Wadden Sea Plan"

Acknowledging the successful promotion of sustainable development in the Wadden Sea Region, the 10th Trilateral Governmental Conference (Schiermonnikoog) stated:

"We highly appreciate and accept the Wadden Sea Forum (WSF) as a valuable partner in achieving sustainable development of the Wadden Sea Region and contributing to an Integrated Coastal Zone Management (ICZM) Strategy".

Some years later, also the 11th Governmental Conference on Sylt welcomed the activities and recommendations of the Forum and declared support and cooperation with the WSF as an independent stakeholder forum with a focus on integrated management.

Since March 2011 the WSF is a non-profit society with still a close connection to the TWSC. The WSF is the main stakeholder platform for the TWSC and provides concrete contributions on ICZM issues (Wadden Sea Region Planning Portal, sustainability indicators, climate atlas), conflict resolution in goose management, shipping safety and CO2 neutrality.

### Integrated Coastal Zone Management

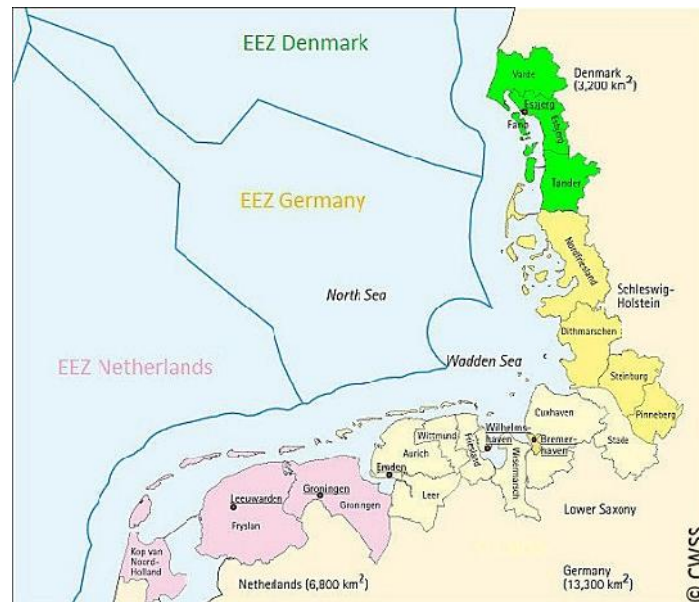
The Wadden Sea Forum has taken up ICZM as a process for achieving sustainable development of the Wadden Sea. The WSF has further developed the ICZM process, including guidance on further specification and recommendations for ICZM to add value to the sustainable development of the Wadden Sea Region. In particular, this means integrating specific cross-sectoral and transboundary strategies, actions and techniques which are environmentally sound, economically viable and socially beneficial.

The increasing uses of the Exclusive Economic Zones (EEZ) further off-shore of the protected Wadden Sea have made the WSF enlarging the scope of work regarding ICZM objectives. Maritime Spatial Planning (MSP) as an instrument in Integrated Maritime Policy (IMP) follows similar principles like those of ICZM. Therefore, MSP and ICZM in the Wadden Sea Region are very much linked and are combined in the strategy for the Wadden Sea Region (WSR).

Administratively, the three Dutch Wadden Sea provinces, the German counties along the coast and the Danish Wadden Sea municipalities are part of the

Wadden Sea Region (WSR). Taking into account the German Federal State system, the WSF refers to four regions in its work.

Due to the WSF agreements, the Wadden Sea Region covers an area, which encompasses the coastal zones, the Wadden Sea with its islands and sands and the relevant parts of the North Sea EEZs of Denmark, Germany and The Netherlands.



### Structure of the Strategy

This document enrolls the WSF ICZM strategy from two starting points: One by framing its own activities within the ICZM concept including links to Marine Spatial Planning and second, by taking the review of its existing vision document "Breaking the Ice" from 2005 as a point of departure to develop its idea of future development for the Wadden Sea Region. This area, as it is spatially outlined in chapter 1.2, defines where this strategy aims to be relevant.

Subsequent chapters develop what to achieve in sequence from a rather abstract long-term vision (chapter 3.1) to more specific objectives (chapter 3.2), many of the latter based on the sustainability indicators developed in the sustainability indicator tool of the WSF.

How to move towards this long-term vision and achieve the objectives, relates to the type of process and instruments which can be used. The ICZM principles defined at European level already in the year 2002 form the starting point. Chapter 4.1 describes how these principles are interpreted and applied within work related to the WSF. Being a platform and network for various actors within the Wadden Sea Region implies that instruments of the WSF (chapter 4.2) mainly relate to either:

- communication among actors, and/or
- information tools

Based on these instruments common focus themes and projects can be defined and out of these evolves cooperation with research institutions and other organisations (chapter 4.3).

While chapters 1 to 3 are based on existing activities and outlines how the WSF works towards its objectives, chapter 4 finally provides recommendations for further development and improvement of the work in the WSF. These are addressed to specific actors (who), linked to a specific timeframe (when) and either particular areas and/or sectors (where).

## Chapter 2: Review "Breaking the Ice"

The ICZM strategy takes into account the strategy results elaborated earlier and documented as "Breaking the Ice". The report was presented as a first step towards an ICZM strategy for the Wadden Sea Region and as a starting point for integrating the national ICZM strategies. Many statements and recommendations made in "Breaking the Ice" are still up to date as an implementation has not taken place. But to some extent, the situation has changed due to the developments in the regions. Therefore, a review is a good measure to identify still relevant subjects of the strategy and also further needs to adapt the ICZM strategy to recent and future requirements.

### 2.1 Tasks of the Forum

When the WSF was established in 2001/2002, the tasks were formulated in an Annex of the Esbjerg Declaration. The focus was on sustainable development scenarios and strategies to be presented to the next Trilateral Governmental Wadden Sea Conference. The results were seen as contributions to trilateral policies and management. The WSF was understood as a three years project, of which the outcomes should have been taken up and implemented by the Trilateral Cooperation. As time passed, stakeholders and the Trilateral Cooperation agreed to continue the work of the WSF to serve as independent trilateral advisory and consultation body to the TWSC. Also after the establishment of the WSF as non-profit society for administrative reasons, the main goals have not changed, but the emphasis has broadened. The WSF is working towards a sustainable Wadden Sea Region and delivers advice on topical issues to the TWSC, regional and local governments and stakeholders.

### 2.2 Working Area

The geographical scope of the Forum was first defined as the trilateral Wadden Sea Area plus the adjacent mainland. In the following periods the working area called Wadden Sea Region (WSR) covered administratively the Dutch Wadden Sea provinces, the German counties of Niedersachsen and Schleswig-Holstein adjacent to the Wadden Sea and the Danish 10 Wadden Sea municipalities, which were merged to 4 municipalities in 2007. The geographical scope was also taken more flexible to integrate effects of measures in a wider region on the Wadden Sea Area. These were mainly related to recent off-shore developments like increasing shipping, mining and energy production. Consequently, the trilateral Exclusive Economic Zones (EEZs) of the North Sea are part of the Wadden Sea Region.

### 2.3 Status and developments (as point of departure)

The Wadden Sea Area was and still is an outstanding natural reserve. The importance was highlighted by the inscription of the Wadden Sea on the World Heritage List. This demands even a higher attention of making the developments in the adjacent areas more sustainable. The description of the socio-economic situation as well as the outlook to the future developments was quite negative in "Breaking the Ice". Decrease of population, insufficient human resources, low innovation and too many rules and regulations were some examples. These statements have to be specified as the decrease of population concerns only some areas while others register an increase. The educational system shows a good standard. The infrastructure of high schools, universities and polytechnics provides good qualification facilities, but unfortunately, young qualified people leave the region, as jobs with higher qualification skills are not sufficiently available. Also investments in an innovative economy are on a low level. "Breaking the Ice" stated too many rules and regulations and a disharmonized implementation of e.g. EU Directives. Changes in legislation as well as

harmonization are a long term process to which the WSF can contribute by elaborating advice. Even if implementation of rules and regulations is undertaken differently on national levels, a trilateral approach and framework should be taken into account.

#### 2.4 Vision and objectives

The vision, defined in 2005, is still of significance. The development has shown that increasing efforts have to be made to reach the status formulated many years ago. Also most of the objectives have not lost their importance; this is due to their generality. After some years of stakeholder dialogues, the made statements about the objectives were the maximum achievable. Today, the objectives could be much more specified and concrete.

"Breaking the Ice" as an important contribution to ICZM for the WSR was welcomed at the Wadden Sea conference on Schiermonnikoog, but the recommendations were hardly implemented. This was also due to the fact that the elaboration and implementation of national ICZM strategies according to recommendations of the EU Commission was not intensively pursued.

Progress was made in developing sustainability indicators for the defined objectives. For several of these, trilateral applicable indicators were defined and monitored for almost 10 years. The indicators deliver a worthwhile picture of how the WSR has developed over time.

#### 2.5 Objectives and strategies

The WSF defined objectives and strategies for some overarching issues, which concerned all sectors, e.g. coastal protection and infrastructure as well as for several sector specific developments. The knowledge and understanding about/of the various development drivers was and still is essential for participatory and integration processes, which are also fundamental parts of ICZM.

##### a) Infrastructure

Infrastructure was considered as an important precondition for the economic and social welfare. Objectives were related to an improvement of the accessibility of the region by road, train, air and waterways. It must be recognized that the influence of the Forum on infrastructure measures was quite limited, also because the work on infrastructure was not seriously followed up. Infrastructure regarding the energy and harbor business was addressed by the concerned working groups. Today, infrastructure is also part of the ICZM strategy for the WSR and according to the social dimension, infrastructure elements like education facilities, communication networks and health infrastructure are addressed.

##### b) Coastal defense

"Breaking the Ice" has not defined objectives and elaborated a strategy on coastal defense. The report referred to the trilateral working group "coastal Protection and Sea Level Rise" (CPSL), who investigated the possible effects of sea level rise. The WSF welcomed the results of the working group and recommended to continue the work with a focus on management and on integration in a joint ICZM strategy.

At a later stage, the WSF integrated the issue of climate change and measures like mitigation and adaptation in WSF activities of several working groups.

##### c) Shipping safety

The WSF dealt intensively with shipping safety and pollution. An important output was a study on maritime safety and pollution prevention carried by GAUSS mbH. "Breaking the Ice" delivered a set of 35 recommendations with regard to spatial planning, shipping safety, emergency management, pollution and Port State Control. These recommendations were included in the Schiermonnikoog Declaration as an Annex. In order to proceed, a set of priority recommendation was also defined for immediate implementation. Many of the recommendations

are still of high importance and should be considered in present developments and taken up in the Tønder Declaration in February 2014.

#### d) Agriculture

The formulated vision of the sector aimed at a further development with a profitable income, taking into account the full variety of the cultural historic landscapes and the characteristic natural environment. Structural changes like scale enlargement as well as service and product diversification were measures to ensure a profitable agriculture. The approach was partly achieved with regard to service diversification and conversion of production. On the other hand, developments in the energy market resulted in a conversion to an energy supplier of the sector, which did not contribute to a sustainable agriculture. Single-crop farming for energy production with has low efficiency and displaces cultivation of regional products.

#### e) Fisheries

The sector aimed at a prosperous business with a long-term perspective by securing a healthy, dynamic ecosystem. Following, an efficient resource management, diversification, improvements of facilities and innovation were part of the formulated sector strategy to work towards a long-term, profitable fishing. Recommendations were directed to the political level to provide the necessary infrastructure and administrative support. Progress has been made with regard to labeling and innovative equipment. But still, many conflicts within the sector on transnational level and with regard to nature conservation and the growing off-shore business have not been solved.

#### f) Energy

Vision and strategies formulated in "Breaking the Ice" were very future orientated and are therefore also at present time still valid. Strategies to foster renewable energy production were transformed into businesses with an emphasis on wind and solar energy. Other recommendations, like the request of energy saving by 20%, increasing energy efficiency and implementation of combined heat and power systems (CHP) were not sufficiently transformed into application. The requested use of liquefied natural gas (LNG) as alternative fuel in the transport sector has been further promoted and is still on the agenda. The further work of the Forum on energy transition, supply and distribution can build on the strategies and recommendation formulated almost 8 years ago as well as on the Sylt Declaration, which requested a development of a CO<sub>2</sub> neutral Wadden Sea Region by w2030 or earlier.

#### g) Industry and Harbor

The elaborated vision and strategies aimed at a healthy economic region with competitive harbors. The focus was on specialization in the food sector, the clustering of large scale industries to get spin offs as well as on a harbor concept to use optimal capacities. The WSF promoted the vision and necessary measures among the stakeholders in the past years. To achieve the aims, the collaboration with the regional and national governmental level has to be increased. The former recommendations can be used to build a basis for further specification and initiatives.

#### h) Tourism

In retrospect, vision and formulated strategies could have served as a basis for activities in the frame of the Wadden Sea World Heritage Site. High quality tourism, new markets, tourism as partner in promoting the unique nature and cultural landscapes and the development of a marketing strategy were already requested in "Breaking the Ice". Nowadays, this is going to be implemented under the umbrella of the World Heritage Site. Due to these developments, the WSF

supports the tourism activities of the state parties and the TWSC through stakeholder input, rather than working for its own with an additional working group. Given its membership of many stakeholders, including local authorities, the WSF is prepared to play an active role in the implementation of the trilateral Sustainable Tourism Strategy.

## 2.6 General assessment

In 2005, it was recommended to continue the work of the WSF to provide a platform for information and knowledge exchange. Also a further dialogue between the stakeholders was seen as important to overcome the conflicts, and new initiatives and actions should be initiated. This has been successfully fulfilled and is still ongoing.

The WSF plays an important role in sustainable development and conflict resolution. The WSF has succeeded in widening the sector and cross-sector dialogues on transnational level. Cooperation and networking with other organizations as well as with the political levels have been strengthened. Several working groups meet several times a year and also plenary and steering committee meetings take place frequently.

Till the Wadden Sea Conference in 2010 on Sylt, the WSF worked on maritime spatial planning, future energy concepts, relevant shipping issues and goose management. The sustainability indicator tool was further developed and ICZM with regard to stakeholder approaches was addressed to the EU Commission. The WSF also supported the inscription of the Wadden Sea as World Heritage Site. These achievements were acknowledged in the Sylt Declaration.

Continuing, the WSF has established a secretariat to facilitate the work of the Forum, which was recommended in "Breaking the Ice" too. The Forum proceeded with the extension of the sustainability indicator tool, implemented a planning portal to visualize economic and social developments in the entire Wadden Sea Region and elaborated a resolution on shipping safety, taking into account stakeholder requirements. Also recommendations with regard to goose management were further specified to proceed with implementation. Furthermore, the Forum worked on advice to become a climate friendly WSR in the near future. Finally, the WSF stakeholders have elaborated on sound and effective tools for an ICZM strategy for the trilateral WSR.

The Wadden Sea Forum will play an important role as stakeholder forum and platform for knowledge and information exchange also in the future. The added value in participatory processes and transnational cooperation with regard to a sustainable development of the Wadden Sea Region will be further demonstrated and intensified. It is envisaged to strengthen the synergies of the transnational network and to consolidate the stakeholder – policy – science interface. This will definitely serve as a model for a more sustainable development of regional sea basins in the European context.

## Chapter 3: Vision and Objectives for the Wadden Sea Region

### 3.1 Vision

The Wadden Sea Forum aims at a sustainable society by 2030 in which:

Economic activity supports social development and safeguards healthy ecosystems and cultural historic landscapes throughout the Wadden Sea Region

In order to reach this goal, authorities and other decision making bodies will have initiated a development process across the Wadden Sea Region, in which the people and stakeholders were involved. Also the sectors will have started a process to use synergies and to aim at coordinated regional implementation.

New governance mechanisms, particular a sound stakeholder-science-policy interface provide effective information exchange to facilitate the coordinated elaboration and implementation of trilateral strategies and action plans with regard to spatial planning, infrastructure, transport, agriculture, fisheries, tourism, coastal defense, shipping, port facilities, social services, nature protection and any other policy areas with a possible impact on the sustainable development of the Wadden Sea Region.

### 3.2 Objectives

The aim of this ICZM strategy is to achieve the objectives formulated below.

#### Introduction

The ICZM strategy encompasses a number of sustainability objectives, which are relevant for implementing the strategy. In "Breaking the Ice" many objectives were defined in general terms. Over time, the WSF has worked on sustainability indicators, which do measure some of the objectives to document how the WSR is developing and to record if this is in line with the aims. In the following, the objectives for the social, economic and ecological dimension are explained how the WSR should develop during the coming two decades and how the Region should look like in the future.

In order to measure the developments and the actual status of sustainability in the WSR according to the defined objectives, the WSF has developed a tool with sustainability indicators. The instrument contains primary data from 2003 till 2013 and is maintained throughout the years and adapted to the changes within the national and regional statistics. Through an assessment of the data, trends in developments in the social, economic and ecologic dimension are emphasized.

The particular importance of the instrument lays on trilaterally harmonized data sets so that statements for the entire Wadden Sea Region as well as a comparison between national regions and municipalities are possible. The instrument delivers indications, where decision makers can change and steer the development process to reach more sustainability. The WSF compiles all the data, makes assessments on a multi-level system and continuously investigate new significant indicators.

The results of the sustainability indicators document the general developments according to the objectives within the past ten years. A deeper analysis of the sustainability indicators, which will be elaborated in cooperation with the Dutch Wadden Academy, will investigate the driving forces of the developments and its interrelations. So far, a comparison between the objective aims and the real developments in the past till today, builds the basis to draw recommendations for actions to reach the aims.



In the following, objectives for the most relevant issues/themes, defined and formulated by the WSF recently, are described in headlines. For those, who have been analysed by indicators, the results are briefly stated.

## Social

A sustainable social environment is of great importance for society. This will strengthen the communal life and the interest for the Region. A healthy social dimension will also build a sound basis for cooperation and collaboration in various fields and will keep the rural areas vivid. Exemplary for a healthy society, the WSF has formulated some objectives according to the WSF vision and these should be reached mid-term.

- Demography

Objective: The WSF aims at a balanced population structure with a healthy share of young and elderly people. Also young people stay in the Region and the population growth is not negative.

Indicator results: The population structure is not balanced. In the WSR lives a higher share of elderly people in comparison with the national average.

- Education and research

Objective: In the WSR a sound education and research system is in place to provide perspectives for the younger generation as well as for high quality jobs. This will also be beneficial for the attractiveness of the Region.

Indicator results: With regard to the results in education and research the WSR is doing well. The share of school leavers with vocational or higher education is higher than the national average and also the research facilities are growing.

- Employment

Objective: In the WSR almost full employment can be stated. In order to provide a robust and attractive employment market, a high diversity of the labor market is in place. Not only high-quality jobs are offered but also jobs for lesser educated people.

Indicator results: The unemployment rate is higher and the share of high quality jobs is lower than the national average, even though the education facilities are good.

- Health

Objective: The WSR provides a healthy environment, which has positive effects on people's health. A good medical infrastructure ensures the medical care for the people in the WSR. High medical standards are also provided in rural areas.

Indicator results: The analysis shows that in average in the WSR more people stay in hospitals than on national level.

- Welfare

Objective: The people living in the WSR have an adequate income, good living conditions and high life expectancy. Social equality as well as balanced leisure time ensures satisfaction among the population. Furthermore, the people in the WSR do strongly identify with their region.

Indicator results: The analysis of the indicator data shows that the situation in the WSR with regard to Gross Domestic Growth (GDP) and cash benefits for households with low income goes along with the national situation. But welfare is more than GDP and other aspects have to be improved to work towards the objective.

- Cultural history

Objective: The cultural historic landscapes and the cultural heritage are visible in the regions and well preserved. The management of the heritage enriches the values and tells the continuing story of living in the WSR, a landscape of world-uniqueness.

No Indicator available

- Cultural identity

Objective: The people feel proud of being of the Region and actively increase the awareness about the WSR. They are aware of the historic development and of the transnational heritage values. Local production and products play an important role in the world of work as well as in consumption.

No Indicator available

## Economic

A healthy economy would not only be beneficial for the welfare of society but would also generate surpluses for environmental protection measures. A balanced economic development keeps the region vivid and provides future perspectives for the people living and working in the Region.

- Economic resilience

Objective: The economy in the WSR is resilient against all sorts of interruptions and disruptions, like periodic economic recession, the unpredictable rise of major competitors elsewhere, unexpected plant closures and the challenges arising from technological change. Economy has integrated region specific values and uses the given natural opportunities. Furthermore, it is characterized by innovative developments and responsible entrepreneurs.

Indicator results: The WSR economy has developed not so bad with regard to value added growth, but R&D expenditures were quite weak although education and research facilities were good.

- Harbour

Objective: Harbor development in the WSR uses the challenges and benefits of being environment and climate friendly. Adequate facilities to reduce emissions, waste and harmful substances are implemented. A harbour concept is in place to coordinate services and order situation as well as to maintain the competitiveness.

Indicator results: The indicator measured the level of specialization, which is also an evidence of cooperation between the harbours. In the past years the indicator shows a negative trend.

- Shipping

Objective: The southern North Sea is an area well-known for its safety in shipping. A sound vessel traffic monitoring system is in place, places of

refuge are implemented and transnational cooperation guarantees best traffic management in estuaries and main shipping routes. Emergency control in the WSR is stated as best practice example of the world. Alternative ship propulsion has been developed and contributes to a cleaner environment.

No Indicator available

- Energy

Objective: The energy transition to environmental friendly energy production has been successfully implemented and the production of energy is based on a broad and secure foundation. Off-shore wind parks and decentralized Heat and Power (CHP) systems deliver climate friendly energy. Gas power plants are reactivated or newly constructed to support the supply chain. The price for CO2 certificates is on a level which stimulates further energy savings. New energy storage capacities have been developed and sound energy saving measures are in place.

No Indicator available

- Agriculture

Objective: Agriculture is a profitable business due to the production of high quality products and the cooperation with producers and consumers of local products. Scale enlargement is an option only for a few farmers and also smaller farms have their income. Nature and landscape management is an adequate part of the business. The production of energy crops plays no role. Sufficient compensation measures for harvest losses, e.g. caused by geese, are in place.

No Indicator available

- Fisheries

Objective: A long term perspective for the fishery sector is guaranteed. New fishing equipment is used to reduce the damage on the ecosystem. Fish stocks are not endangered and have recovered due to sustainable fishing and no fishing zones. In the Wadden Sea Region only certified fishing methods are used and the products have a quality label. The fleets of the WSR play also an important role in cultural identity and tourism marketing.

No Indicator available

- Tourism

Objective: A sustainable tourism strategy for the WSR is in place and the Wadden Sea World Heritage Site is well managed. The quality tourism has increased and the cultural landscapes and heritage are acknowledged as tourism destinations. The ferries to the islands run emission free and education in sustainable tourism is on a high level.

Indicator results: The analysis of the tourism data show an increase in overnight stays in the WSR.

- Rural development

Objective: The rural areas are vivid, new innovative enterprises have been established. A perspective for the younger generation has stopped the emigration of young people. Small villages are intact and the historic landscape is well preserved. Innovative communication systems within the

labor market have strengthened the rural areas with regard to attractiveness.

Indicator results: The settlement of new businesses shows a positive trend and emigration and immigration of people are balanced.

## Ecological

In a sustainable Wadden Sea Region, a healthy environment is a precondition and the basis for the socio-economic development.

- Biodiversity

Objective: The WSR exhibits a rich biodiversity not only in the Wadden Sea itself but also behind the dikes. Bogs, wetland meadows and typical hedgerows contribute to the variety of species and biodiversity. Landscape management and sustainable agriculture as well as the natural dynamics of the Wadden Sea ecosystem maintain these natural values.

No Indicator available

- Air quality

Objective: Air quality in the WSR is far better than in other regions. To some extent this is a result of being a coastal area with sea breezes, but also due to the success of energy transition with a focus on wind and solar energy. Also the efforts in clean shipping have contributed to the good quality status of the air.

Indicator results: The indicator measures nitrogen, ozone and fine particles. As ozone and fine particles exceeded the safety limits on several days, air quality was stated as negative, even if the annual average of the emissions was in the normal range.

- Climate friendly WSR

Objective: Greenhouse gas emissions have been reduced, so that the WSR is almost CO<sub>2</sub> neutral. Electricity is produced predominantly by solar and wind power, the ferries to the islands run with fuel cells or LNG. The Wadden Sea islands have been the pioneers in the transition to climate friendly regions. Overcapacities in energy production are stored as hydrogen or methane. Coal power plants along the coast are only used to guarantee a safe base load. Energy saving measures are in place all over the Region.

No Indicator available

- Darkness and silence

Objective: Light pollution has been reduced to a maximum extent. New techniques are implemented which allows illumination only on demand. Energy saving lighting is installed in all towns and villages. Industrial plants illuminate only the various facilities and not the whole area with emission in the surrounding environment. The night sky appears darker than ever. Also noise emissions have been reduced. Transport is much quieter and also port handling uses several measures for noise reduction.

No Indicator available

- Wadden Sea World Heritage

Objective: The protection, management and awareness of the property are safeguarded. Also the common responsibility for the site has been

strengthened and the people feel proud of this outstanding asset. The development of the WSR is sustainable without adverse impacts on the Wadden Sea. National and international cooperation and awareness on World Heritage promote and support the dealings with the site.

No Indicator available

- Cultural landscapes

Objective: The most valuable features of the cultural landscape are visible, preserved and maintained. Spatial development is aware of the landscape assets and a cultural impact assessment is obligatory for development measures. The landscape and heritage of the WSR are managed as one coherent natural and cultural heritage in a land sea interface. Also the maritime archaeological sites are investigated and preserved.

No Indicator available

### 3.3 Recommendations

Besides the definition of overall recommendations as part of the ICZM strategy for the Wadden Sea Region (see chapter 5), some specific recommendations related to the objectives can be drawn. This is to improve and adapt the strategy to new findings of assessments and to an improved knowledge base.

- A first assessment of the indicators delivers a trend in developments. For decision making, a deeper analysis is necessary.
- Investigate the driving forces for the development trends to get clear background information for decision making.
- Develop further indicators for all defined objectives to allow a robust assessment.
- Integrate nature and culture objectives to better integrate the socio-economic development in natural processes.

## Chapter 4: Implementation

### 4.1 Principles

#### 4.1.1 ICZM principles

For working on the objectives of its ICZM Strategy, the WSF follows the principles formulated by the EU in its 2002 recommendation on ICZM. These principles, based on experiences and good practice as identified, inter alia, in the Commission's demonstration programme on integrated coastal zone management between 1999 and 2002 are recognized as a way of how to ensure good coastal zone management. The principles are:

- a) a broad overall perspective (thematic and geographic), which will take into account the interdependence and disparity of natural systems and human activities with an impact on coastal areas;
- b) a long-term perspective which will take into account the precautionary principle and the needs of present and future generations;
- c) adaptive management during a gradual process which will facilitate adjustment as problems and knowledge develop. This implies the need for a sound scientific basis concerning the evolution of the coastal zone;
- d) local specificity and the great diversity of European coastal zones, which will make it possible to respond to their practical needs with specific solutions and flexible measures;
- e) working with natural processes and respecting the carrying capacity of ecosystems, which will make human activities more environmentally friendly, socially responsible and economically sound in the long run;
- f) involving all the parties concerned (economic and social partners, the organizations representing coastal zone residents, non-governmental organizations and the business sector) in the management process, for example by means of agreements and based on shared responsibility;
- g) support and involvement of relevant administrative bodies at national, regional and local level between which appropriate links should be established or maintained with the aim of improved coordination of the various existing policies. Partnership with and between regional and local authorities should apply when appropriate;
- h) use of a combination of instruments designed to facilitate coherence between sectoral policy objectives and coherence between planning and management.

#### 4.1.2. The WSF approach

The WSF works on the ICZM principles as follows:

(a) The thematic perspective of the WSF is already broad, covering aspects of nature conservation as well as economic and cultural issues as can be seen from the different working groups. With this broad scope the WSF also acts as an independent advisory body for the Trilateral Wadden Sea Cooperation (TWSC) in order to ensure that cooperation in the Wadden Sea Region (WSR) recognizes expressed needs of local actors and can address more than nature conservation goals. In this sense the WSF also aims to support the development of a broad regional "Wadden Sea" identity, a factor that has been identified by social research as a key to successful cooperation.

The geographical scope of the Forum is taken more flexible to integrate effects of measures in a wider region, mainly related to recent off-shore developments like increasing shipping, mining and energy production. Following, the trilateral Exclusive Economic Zones (EEZs) of the North Sea are seen as part of the Wadden Sea Region.

(b) All current issues and activities discussed in the WSF WGs are based on a consensual vision (Breaking the Ice), which formulates a long-term perspective. To create a sustainable Wadden Sea Region as an overarching goal is defined in the WSF as a long-term perspective. To monitor long-term developments and identify critical as well as positive trends the statistics based sustainable indicator tool has been developed.

However, improvements in indicator development, technical fine-tuning and regular (annual) updating are needed to increase operational applicability of the indicator tool. A significant problem is that changes in official statistics and differences in spatial coverage imply artificial changes in the indicators. To overcome such barriers stronger support from statistical offices in the 3 Member States would be needed.

(c) The WSF cooperates with scientific institutions which are active in the region, e.g. the Waddenacademie and HZG and with networks such as EUCC-D. As well the WSF participates in research projects when appropriate, such as the EU project ENHANCE. Cooperation partners include scientists from several disciplines including natural as well as social scientists. Concerning nature conservation, science is provided through the Trilateral Wadden Sea Cooperation. The sustainability indicator tool and the Planning Portal are aimed to provide a monitoring basis for social, economic and natural changes and can be seen as an "early warning" barometer, which can be used to identify more specific research and / or management needs.

(d) The WSF sees itself as part of a wider group of actors which should develop ICZM at different levels and scales. For actors being active at European, Regional Sea, national, and the level of subnational regions which encompass other areas than only the Wadden Sea Region, the WSF acts as an advisor on local specificity for the trilateral WSR. It provides the insights, knowledge and contacts into the WSR, which support outside actors to recognize the WSR specificities, concerning natural conditions as well as economic, social and political structures. It therefore can act as an intermediary between the trilaterally organized local actors, national actors and EU institutions.

(e) The actors organized in the WSF, aim to apply this principle in their daily activities and to develop joint approaches and information exchange on good practice how to apply it for management purposes. The WSF stakeholders have acknowledged the targets in protecting the Wadden Sea ecosystem as basic principle. Monitoring programs accompany gas and oil extraction to identify impacts on the environment such as pollution, changes in biodiversity and subsidence of the seabed. The WSF supports the development of a sustainable tourism strategy to safeguard the natural and cultural values of the Wadden Sea World Heritage Site.

(f) The Wadden Sea Forum represents a wide group of actors ranging from local governments and regional to non-governmental organizations, including organizations from economic sectors, local companies and environmental NGOs. National authorities/governments are only participating as observers. Initiatives and decisions within the WSF are made in meetings and workshops, in which all parties are involved. The WSF ICZM strategy is adopted by the plenary. Furthermore, strategies for topical issues and developments are elaborated on a cross-sectoral level and in a participatory process. WSF examples are the elaboration of a goose management scheme, the strategy to develop the WSR into a climate friendly Wadden Sea Region and a resolution on shipping safety.

(g) With local and regional administrations as regular members and national bodies as observers the WSF aims to provide a structure which enables coordination and information exchange among various administrations.

Coordination between local and regional governments is a quite good functioning system, as both levels are represented in the Forum. Also on a transnational level, this collaboration is implemented. In the Wadden Sea Region there is a long history of transboundary coordination on local and regional level. This is partly based on the common cultural history with settlement development, trading and cultural identity.

Nevertheless, there is a lack in horizontal cooperation and partnership on national level. ICZM demands a close cooperation among the different ministries and state agencies. This can be improved.

(h) Policy coherence and coherence with planning and management is not an issue in the dealings of the Forum. The responsibility for policy and planning is on the local and regional governments. The Forum of course, brings together the different sectors including the administrative bodies for knowledge exchange and elaboration of common aims and objectives, but has not the power to manage coherence between policies and planning.

#### 4.2 WSF instruments

The application of ICZM in general is implemented by a use and combination of multiple instruments, like legal and economic instruments, voluntary agreements, information provision, technological solutions, research and education.

Also the WSF uses instruments, which encourage the ICZM process and are inherent parts of implementing the ICZM strategy. The WSF instruments are used to reach the vision and objectives and do follow the described ICZM principles.

- a) WSF structure and governance
  - Plenary meetings
  - Cooperation, transboundary
  - Sector coordination
- b) Working groups
- c) Sustainability indicators
- d) Planning Portal
- e) Research (Climate atlas...)
- f) Workshops and symposia
- g) Awareness



(a) The WSF structure and governance processes very much support the implementation of the strategy. The plenary meetings guarantee an involvement of all stakeholders and an open participatory process. Also the relevant administrative bodies at national, regional and local level are involved. The working groups integrate the sectors in the ICZM process and do elaborate on topical management issues relevant for coastal development. Plenary and working groups define sustainable management themes within the WSR.

The structure of the WSF ensures cooperation between the sectors as well as between the involved countries. Transboundary cooperation is of crucial importance for maritime spatial planning (MSP) and transnational agreements. In this context, the shared Wadden Sea ecosystem and the common cultural landscape are taken into consideration to work towards a sustainable WSR.

(b) Working groups are established by the WSF plenary to elaborate on relevant themes and topical issues contributing to a sustainable development of the WSR. The working groups also deliver a sound knowledge base to define objectives and to work towards the joint vision.

The ICZM group is responsible for the common and integrated management strategy for the WSR and elaborates on supporting instruments such as the indicator tool and the planning portal. Furthermore, a dialogue with the EU commission will address stakeholder strategies and practical experience to European policies and vice versa European ICZM and MSP initiatives to the Wadden Sea Forum.

The working group Energy/Industry is currently working on energy production and supply in the coastal region and discusses new technologies of energy storage. An emphasis is laid on a reduction of greenhouse emissions, particularly of CO<sub>2</sub>. It is envisaged to provide a concept to develop the WSR into a climate friendly, respectively a CO<sub>2</sub> neutral Region by 2050 or earlier. Recommendations will be forwarded to the political level and relevant stakeholders (see Annex 01).

The working group Shipping & Harbor elaborates on shipping safety in the southern North Sea, on clean shipping due to emissions and waste control as well as harbor cooperation among the Wadden Sea harbors. An emphasis is laid on a resolution on shipping safety with an outlook on VTM in sensitive marine areas (see Annex 02).

The working group Agriculture concentrates on the elaboration of trilateral goose management framework scheme. This management framework aims at the accommodation of geese by balancing recreational and economic interests in an international perspective. It will deliver concrete proposals and advice for the designation of Go-areas and No-go areas in a trilateral framework, taking into account compensation and management schemes to be integrated in agricultural production (see Annex 03).

The working group Cultural Identity brings together multi-cultural initiatives to better integrate the cultural history in the socio-economic development of the WSR and to further elaborate on the cultural grounds of the people living in the Region. This is to strengthen the identity with the WSR and to keep the heritage alive.

The working group fisheries is currently pending. It is envisaged to work on a prospective future for sustainable fisheries, as the sector plays an important role in coastal economy and regional identity.

Besides the structure also some hard instruments are used (c and d):

(c) The sustainability indicator tool is an instrument to communicate the developments and trends in sustainability to stakeholders, politicians and other interested organizations. The data sets of the indicators can measure and evaluate the development of the ecological, economic and social condition in the Wadden Sea Region. The WSF has identified a set of trilaterally applicable indicators, to measure the status of sustainable development and the progress in achieving the objectives. For most of the objectives indicators were defined and the results of some 10 years provide an insight in changes of developments and trends in the WSR (see also chapter 3.2).

(d) A further instrument is the WSR Planning Portal. The Planning Portal, based on a GIS, is an innovative application mapping the WSR including the EEZs of The Netherlands, Germany and Denmark. The Planning Portal has a focus on existing and partly planned activities in coastal and off-shore areas. It contains a wide range of uses, facilities and protection demands and is designed to meet the information needs of integrated management and marine spatial planning. It meets the need for information of coastal communities and stakeholders and lowers the barriers to actively participate in transnational planning and management processes.

(e) Research investigations improve the knowledge base for a sound management and help to understand natural processes in the coastal zone. The WSF is scientifically supported by e.g. the Dutch Wadden Academy, that does research on the sustainability indicators, the Leibniz Institute for Baltic Sea Research (IOW) who supports the Planning Portal and the Helmholtz Zentrum Geesthacht (HZG) who has developed the Wadden Sea climate atlas and advises the WSF with regard to climate change and adaptation measures.

(f) Workshops and symposia are tools for information exchange, increasing the knowledge base and for disseminating experiences and results about the ICZM process and implementation results. These events are also fantastic opportunities for awareness building.

(g) Awareness raising is an important measure to reach commitment and support for implementing the ICZM strategy.

## 4.3 Cooperation

### 4.3.1 Introduction

Knowledge within science, policy, private sectors and the public about functions and processes affecting the natural and social environment is needed to ensure a sustainable development. This also applies for the Wadden Sea Region. Dynamics like the regular tidal water flows, storm surges and flooding as well as changes within the environment in times of climate change have an impact on the people living close to and with the sea.

Taking into account a wide-ranging, overall perspective to support, an integrated management is crucial to fulfill the needs to foster sustainable development in the region. Therefore, the WSF provides an important platform for stakeholders and experts, who has regularly meetings within six topical working groups, namely on ICZM, Shipping & Harbor, Energy/Industry, Agriculture, Cultural Identity and Fisheries, for exchanging knowledge and information.

Regional and international cooperation between Forum partners and experts from academia, research institutions and projects, from NGOs and the private sector are of crucial importance to work towards the joint vision and to implement the

ICZM strategy for the WSR. In the following, main cooperation with external partners is briefly described.

#### 4.3.2 Cooperation with Governments

Trilateral Wadden Sea Cooperation, TWSC: The WSF cooperates with the TWSC thematically on goose management, cultural heritage issues, CO2 reduction and sustainable tourism. Recommendations and advice of the stakeholders with regard to sustainable development is forwarded to the Wadden Sea Board (WSB), the governing body of the TWSC, in which the WSF has two advisor seats.

#### 4.3.3 Cooperation with public bodies/organizations and NGOs

Costal Union Germany, EUCC-D: With EUCC Germany the WSF collaborates on the WSR Planning Portal and on ICZM/MSP matters. Scientific investigations and maintenance of the Planning Portal are done by EUCC in Warnemünde. The cooperation focuses also on information and knowledge exchange due to ICZM matters and topical issues in this field.

North Sea Commission: Information exchange with the NSC is mainly on Maritime Spatial Planning (MSP) and stakeholder involvement. Common initiatives were made to establish a North Sea wide stakeholder forum.

#### 4.3.4 Cooperation with research institutions

Wadden Academy: Information and knowledge exchange with the Dutch Wadden Academy is on socio-economy of the WSR and on cultural landscapes. With regard to socio-economy, the Wadden Academy assesses the sustainability indicator tool and analyses the driving forces of changes in developments.

Helmholtz Zentrum Geestacht, HZG: Besides the scientific support of the HZG due to ICZM, the climate office of the HZG has adapted their existing climate atlas to the requirements of the WSF sectors. The scenarios support the dealings with climate change and adaptation within the WSF.

#### 4.3.5 Cooperation with projects

Enhancing risk management partnership for catastrophic natural disasters in Europe, ENHANCE: ENHANCE is a project under the EU FP7 and aims at developing and analysing new ways to enhance society's resilience to catastrophic natural hazard impacts. The WSF contributes with stakeholder workshops and advice.

Architecture and roadmap to manage multiple pressures on lagoons, ARCH: ARCH is a research project under the EU FP7 and develops methodologies to manage the multiple problems affecting lagoons in Europe. The WSF delivers advice from a stakeholder view to the project.

## Chapter 5: Recommendations (to be elaborated at ICZM-20 on 11 October)

The recommendations are the essential part of the strategy. The recommendations will be addressed to responsible levels/bodies and will indicate a time frame and geographical scope for implementation.

### 5.1 Policy and planning integration

In order to achieve integrated policies it is essential that from the early stages of policy-development the interests of all stake-holders are taken into account. This means that cross-sectoral as well as, in some cases, cross-border consultations must be held.

### 5.2 Integrated Management

Integrated management flows from integrated policy-making and planning. Therefore, again (representatives of) all stakeholders must be involved in management. An effective way of achieving this is making use of advisory bodies at the appropriate level.

### 5.3 Trilateral/transnational integration

### 5.4 Partnership

### 5.5 Monitoring

### 5.6 Awareness

## Annex 1

## Main results, recommendations and statements of the WSF working group Energy/Industry

a) CO<sub>2</sub> neutrality

To work towards CO<sub>2</sub> neutrality, the system and boundaries have to be defined. (which sources are part of the calculation, which measures contribute to balance the emissions, etc.) To elaborate a concept for implementation, a start should be made with a manageable area like a Wadden Sea island, which can function as a show case for other regions. For the different systems, interacting components have to be defined and considered in further neutrality calculations. Also incentives as instruments for CO<sub>2</sub> reduction have to be integrated. The whole process of CO<sub>2</sub> reduction encompasses different measures like avoidance, minimization, reuse, capture and storage and regulation.

The various approaches and views described above show the complexity of CO<sub>2</sub> neutrality, therefore, the working group recommends

- To establish a close collaboration between the WSF and the WSB to work towards a CO<sub>2</sub> neutral Wadden Sea Region; (spring 2014)
- To implement a conference to discuss and define feasible systems for CO<sub>2</sub> neutrality; (first half 2014)
- To use the recognized area of the Wadden Sea World Heritage Site to raise awareness and to promote CO<sub>2</sub> reduction developments among the stakeholders;
- To develop a roadmap on the basis of an inventory (energy demand, energy production, emissions, regulations, measures); (2014)
- To provide funding for the development of a roadmap; (2014-2015)
- To develop an economic business model for the future. (2015)

b) Economic impacts/influence of energy transition

The economic development will have influence on energy transition as well as on CO<sub>2</sub> neutrality. Also economic impacts on the society such as rising energy costs and constructions of infrastructure have to be considered in these developments.

The working group generally recommends

- To develop concepts with proven technologies in a first step to reduce risks and to reach societal acceptance;
- To use synergies to minimize impacts and costs;
- To strive for a divers energy supply instead of focussing on electric power generation.

Further levels of detail have to be defined in cooperation of stakeholders and political decision makers.

c) Social acceptance

Energy transition needs social acceptance to minimize the conflicts and to go for a smooth development and implementation of measures. Power-to-gas technologies with production, transport and storage could use several options to reduce risks and conflicts. H<sub>2</sub> production and storage as well as H<sub>2</sub> generation by renewable energy sources and its compound process with CO<sub>2</sub> to methane are alternatives. To minimize conflicts with the society and impacts on the environment, a new energy concept could use existing pipelines for energy transport. An integration of electric grids and gas pipelines has to be implemented. The working group generally recommends

- To establish a coalition between stakeholders and governments to jointly promote new technologies in the field of energy transition;
- To initiate an open dialogue with the society;
- To clearly inform about threats and opportunities;
- To involve the society in future developments.

## Annex 2

## Main results, recommendations and statements of the WSF working group Shipping &amp; Harbour

## 1. Introduction

The southern North Sea with its Wadden Sea is characterized by international and short sea shipping, recreational yachting, fisheries, ferry traffic and off-shore services. The traffic lanes directly north of the Wadden Sea, designated as PSSA and World Heritage Site, are one of the busiest shipping areas worldwide.

The Wadden Sea Forum has been elaborating on shipping safety issues for a long time. In the recent past, measures like VTS and VTM came into a particular focus as options to increase safety standards. There is a growing concern about shipping intensity, in particular in the traffic separation schemes adjacent to the Wadden Sea area, in relation to safety and the environment.

Recent incidents like accidents and near collisions, loss of cargo (deck cargo and containers), the developments in the Eemshaven area and also the fast developing offshore wind farms require a re-evaluation of Vessel Traffic Management (VTM) and an assessment what a vessel traffic monitoring in the southern North Sea can provide with regard to shipping safety.

VTM can be described as a guidance advice system and global functional framework for all navigable waters, within which VTS may be the central instrument among various others. This framework shall be supported by information management. The IALA definition of VTM is:

"Vessel Traffic Management is the functional framework of harmonized measures and services to enhance the safety, security and efficiency of shipping and the protection of the marine environment in all navigable waters".

## 2. Analysis of recent developments

## 2.a Shipping developments and cargo

The North Sea is with about 260.000 ship movements ( 300 gross tonnage, GT) annually one of the busiest seas in the world.

Shipping is directed via interconnecting traffic lanes to and from Antwerp, Rotterdam, Amsterdam, Eemshaven, Emden, Wilhelmshaven, Bremerhaven and Hamburg, but also to the North (i.e. to pass Skagen) and North East.

The shipping intensity in the TE-route/ German Bight to these ports amounted in some 50.000 movements in 2010, of which the biggest share was generated by the port of Hamburg. According to the report of the policy document North Sea 2009-2015, the number of ship movements will increase by 14 to 31% in the near future.

This busy shipping route is situated at a distance of approx. 12 miles north of the Wadden Sea, which has been designated as Particular Sensitive Sea Area, PSSA, and of which the Dutch and German part has been inscribed in the World Heritage list.

The developments and expansions in Eemshaven, Wilhelmshaven, Cuxhaven, Brunsbüttel and Hamburg will cause an increase in the number of tankers, bulk carriers and containerships approaching the ports.

The capacity of shipping lanes in the estuaries will grow to its limit without a sound vessel traffic management in outer waters.

The volume of container transport and shipment in the North Sea area is expected to increase, which will contribute to traffic congestion in the area north of the Wadden Sea.

## 2.b Shipping routes

The main shipping lanes to the north of the Dutch and the Niedersachsen Wadden Sea are the so called TE-Route and the Deep Water (DW) Route.

The DW-Route is mandatory for ships which are designated according the IMO regulations as Oil, Gas and Chemical tankers >10.000 GT and some chemical tankers > 5000 GT.

Tankers should take the shortest route from the ports to DW-Route and these ships are not allowed to take the TE-Route.

The development of the Eemshaven will cause an increase in crossings between the DW Route and the TE-Route.

Oil tankers and bulk carriers have to meet a tidal window because of the special conditions of the Wadden Sea area with shallow waters, sandbanks and tidal currents. These ships have to operate under a limited time window and will pass the TE-Route in such a way that they will arrive at Eemshaven at high tide.

Obviously, the risk is still too high and any additional risk would be unacceptable in the Wadden Sea, which is designated as a PSSA and World Heritage Site. And, the implementation of off-shore wind farms nearby the main shipping routes will add a considerable additional risk, which asks not even for more careful consideration, but also for measures which would compensate for this additional risk (Sylt Declaration 2010, § 36: "Reaffirm the importance of shipping safety with respect to any offshore activity. The safety of shipping in the North Sea Area should be kept at least at the present level, irrespective of which kind of offshore development might occur, and where feasible be enhanced.").

## 3. Recommendations

Recognizing the present and future developments with envisaged increasing risks to the Wadden Sea, the working group Shipping & Harbour of the Wadden Sea Forum recommends addressing the further needs in shipping safety to the Trilateral Wadden Sea Cooperation.

It is recommended that the 12<sup>th</sup> Trilateral Governmental Conference on the Protection of the Wadden Sea on 5 February 2014 in Tønder adopts the document as part of the Ministerial Council Declaration.

The working group recommends developing a trilateral system for vessel-traffic monitoring in the German Bight with the aims to ensure strict compliance to existing rules, to prevent dangerous situations, to intervene immediately when a dangerous situation develops despite all efforts to prevent it, and overall to contribute to the implementation of § 36 Sylt Declaration.

This system will built on best practises applying vessel management in estuaries and harbour approaches for further voluntary use in the main shipping routes to support a smooth vessel handling. A close cooperation between shipping and port authorities, coast guard and ship owners will contribute to an enhancement of the system.

An enhanced vessel monitoring system will enable the coastguards or any other competent administration, to monitor safety of navigation and adherence to the international rules and to provide safety information to shipping, particularly in case of crossings of the DW and TE route of the TSS and harbour approaches.

In particular, it is recommended:

- A more comprehensive monitoring of ship traffic using and crossing the traffic separation schemes;
- Implementation of an area-covering AIS and VTS from Northern Denmark to the South of the Netherlands;
- Combining cooperative and non-cooperative monitoring systems at best technique standards to increase the control system;

- Establishing reporting or calling in points (CIP) at places where ships are leaving or entering a vessel traffic scheme;
- Establishing a north to south lane (v/v) between the Deep Water Route and the TE Route (v/v), which vessels have to use when leaving the Deep Water Route destined for, or leaving from ports in the Wadden Sea Region;
- Ensuring there will be ample room between wind farms, traffic separation schemes and anchorage areas;
- Management and monitoring of the tidal windows in the Wadden Sea area and agreement on a protocol between the relevant authorities for the admittance of approaching vessels.
- Expansion of emergency towing capacity in the Wadden Sea Region;
- Initiative of an introduction of a trilateral vessel traffic management system (VTM) in the Wadden Sea Region as pilot for regional seas;
- Establishment of a transnational maritime operation centre for monitoring and controlling.

Besides monitoring and management in shipping safety, additional measures will increase environmental friendly shipping standards. Therefore, it is also recommended to actively strive for/support

- Application of the Bonn Agreement;
- Application of the EU Maritime Transport Policy (according to goals and recommendations of Commission);
- Application of the Ballast Water Convention;
- The Convention on anti-fouling systems, IMO regulations;
- An action plan micro plastic pollution.

#### 4. Conclusions

With a sound trilateral Vessel Monitoring system and an introduction of a VTM system for the entire area, the safety level for man and environment could be improved. Guidance for shipping in the area should be carried out on a multidisciplinary level between the coastguards, any other control station and port and river authorities. It will have a positive influence on shipping and industry, will enhance safety standards and will acknowledge the protection of the vulnerable Wadden Sea nature reserve and World Heritage Site.



## Annex 3

## Main results, recommendations and statements of the WSF working group Goose Management

## Strategy for trilateral goose management (very preliminary draft)

## Benefits of a coordinated management of geese in the trilateral Wadden Sea Region

The Wadden Sea Region is one of the key areas for staging and wintering Nordic and Arctic geese in the western Palearctic and geese constitute an asset of high conservation and recreational value to the trilateral Wadden Sea. The fact that they to a large extent forage on farmland behind the dikes and consequently create conflicts with agricultural economic interests' makes geese a special case for wildlife conservation and management. This calls for a careful and strategic treatment in order to balance the international conservation obligations, the benefits and costs of hosting the geese.

Firstly, so far the three Wadden Sea countries have not taken a concerted approach to the management of geese despite that various larger-scale conservation and management decisions taken in one country may have knock-on effects in terms of redistributing geese to the other countries. This incurs a risk of an uneven distribution of the burden of hosting geese between the countries.

Secondly, only by an international perspective it will be possible to effectively identify and prioritise areas most suited for an integrated management approach, taking the necessary conservation actions for geese, while minimising the economic costs. This can be undertaken by designing priority goose areas with the combination of accommodation areas with the right ecological conditions and minimal disturbance in the Wadden Sea and integrated NATURA 2000 sites and management zones with farmland crop types not vulnerable to goose foraging in the adjoining polders.

Thirdly, by cooperation it will be possible to improve the mutual sharing of experience and learning as well as better integrating and taking advantage of monitoring and research in the management process.

## Overall objectives

The overall objective is to make a coordinated management of geese in the trilateral Wadden Sea using a strategic adaptive framework which:

1. Ensures the maintenance of goose populations in a favourable conservation status;
2. Integrates geese in conservation and management objectives within the Wadden Sea and behind the dikes;
3. Balances recreational and economic interests in an international perspective and;
4. Increases the mutual sharing of management experience and learning by doing.

## Specific objectives

1.1 Maintain populations of geese in accordance with national and international conservation obligations; provide vital habitats for roosting and foraging with the aim to minimise the cost of agricultural damage; maintain the range of geese with a perspective on the Wadden Sea Region;

2.1 Provide an overview of goose distribution and areas of conflict as a tool to prioritise goose management zones in the integrated Wadden Sea Region;

2.2 Promote/Apply a 'go' and 'no-go' concept for the accommodation of geese in order to minimise agricultural conflicts;

3.1 Evaluate societal costs (economic) and benefits (ecosystem services) of geese in the trilateral Wadden Sea Region;

4.1 Establish an adaptive management framework for trilateral stakeholder collaboration;

4.2 Establish a platform to collect information and effectively sharing experiences with goose management practises and for communication.

## Recommendations

Setting up a Trilateral Wadden Sea Goose Management Forum under the auspices of the Wadden Sea Forum to 1) build the relevant capacity to predict, monitor and evaluate effectiveness of management actions (including scaring, creation of accommodation areas, subsidies, compensation) and 2) share experiences, communicate results and provide guidance to relevant stakeholders.

Prioritisation of goose management zones in the trilateral Wadden Sea is a basic requirement and should be in place as soon as possible, including mapping of specific problem areas and proposals for a design of 'go' and no-go' areas.

The development of new scaring techniques, their practical application and effectiveness at local and regional levels, for example acoustic techniques and derogation shooting, should be promoted.

The trilateral Wadden Sea collaboration is asked to ensure the capacity to effectively monitor the development of numbers and distribution of geese in the Wadden Sea region.

AEWA and Wetlands International are asked to provide up to date international status of goose populations at flyway level.