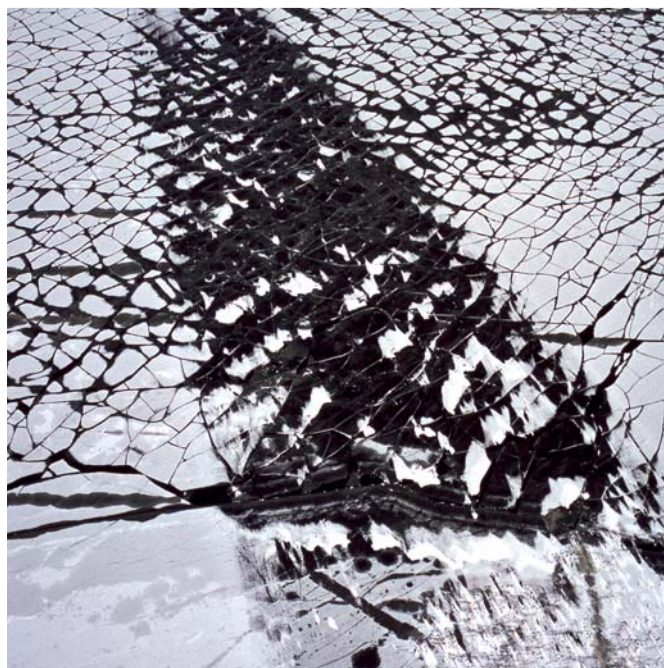


breaking the ice

final report



WADDEN SEA FORUM
WADDEN SEA FORUM



breaking the ice



'Museums with three million inhabitants don't exist. Then again, the Wadden region is not a museum. Preservation? Conservation? Great!

But at the same time, one hears the call for quality of life, for development, for accompaniment on people's voyage, for surfing on the waves of innovation and well-being. To help create this is a great source of satisfaction. This is where economy and nature conservation meet, where interests collide. But, above all, understanding, growing understanding. The Wadden Sea Forum will break the ice between interest groups, and the final report only represents the first steps of this process. Now, collectively creating the future will be an art.'

Ed Nijpels

Commissary for the Queen in the province of Fryslân

President of the Wadden Sea Forum

WADDEN SEA FORUM
WADDEN SEA FORUM



Regional Government Authority
Jörn Klimant
Kreis Dithmarschen

With obligations. *'Reaping follows sowing. By taking part the interest groups committed themselves to work on concrete measures. Some matters can be dealt with in house. For a train connection two countries are needed. And shipping safety requires the involvement of three countries. If the forum is continued, I will continue to commit myself personally.'*

The others. *'There is nothing wrong with an accumulation of compromises, provided that it is not a case of everyone 'cherry-picking''*

'Fair compromises and a challenging basis for new measures.'

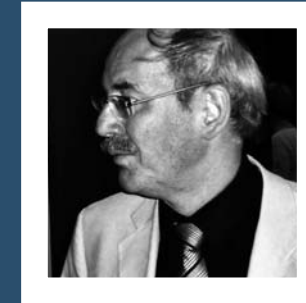
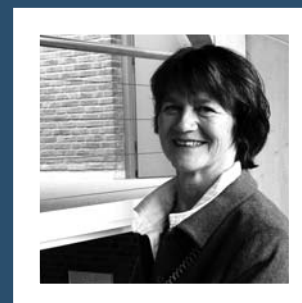


'The contents are satisfactory, the process is excellent.'

Differentiation. *'We must stop competing with the same products. Persisting in old opinions and practices does not lead to anything. You can see this in all sectors. As Mayor I can try to enrich the diversity and to reconcile the conflicting parties. Until we have really achieved something, we should remain modest.'*

The others. *'A strong recreational development will benefit the area. Tourism thrives most when the scenery is attractive and this works in everyone's favour.'*

Dutch Wadden Sea Communities
Joan Stam
Gemeente De Marne

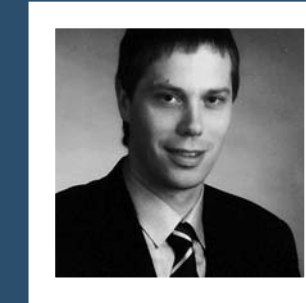


Industry and Harbour
Michael Ahrens
KvK Industrie- und Handelskammer

Tired. *'It was a tough fight and the result deserves to be applauded. However, it shouldn't be that every time sustainability is mentioned, it costs money. The people I represent are starting to get fed up with that. We do not oppose nature conservation, but we also need to make a living. Fortunately, the report gives us that opportunity.'*

The others. *'There is an impressive list of projects to improve living and working conditions and earning potential. Everyone benefits from this, including nature conservationists.'*

'Much agreement. Unfortunately, not about gas and oil extraction.'



Fishery
Peter Breckling
Deutscher Fischerei Verband

Boost. *'Directive scenarios stimulated collaboration. They also gave shrimp fishermen a boost. On the basis of the report our collaboration group argues for catch regulations. Also with the European Commission.'*

The others. *'We've learned a lot from each other. This alone makes the Wadden area a much better place to live in.'*

'A long process leading to a good result.'



1. Introduction	4		
1.1 Why a Wadden Sea Forum?	8		
1.2 The Tasks of the Wadden Sea Forum	8		
1.3 Composition and Way of Working	9		
2. The Wadden Sea Region in Perspective: Status and Developments	13		
2.1 The Wadden Sea Region	14		
2.2 Nature and Environment	14		
2.3 Socio-economic Developments	16		
2.4 The Cultural Landscape under Transformation	18		
2.5 Many Rules and Regulations, Many Layers of Government	18		
3. The Future of the Region	21		
3.1 Vision and Objectives	22		
3.2 A Wadden Sea Region Coastal Zone Management Strategy	22		
3.3 Recommendations	25		
4. Overarching Issues	27		
4.1 Infrastructure in the Wadden Sea Region	28		
4.1.1 Introduction	28		
4.1.2 Objectives	28		
4.2 Sustainable Coastal Defence Strategies for the Wadden Sea Region	31		
4.2.1 Introduction	31		
4.2.2 Procedure	32		
4.2.3 Results	32		
4.2.4 Outlook	33		
4.2.5 Policies and Recommendations	34		
4.3 Shipping Safety	34		
4.3.1 Introduction	34		
4.3.2 Objectives and Recommendations	34		
4.3.3 Recommendations with Priority	35		
5. Sector Strategies	39		
5.1 Sustainable Agriculture in the Wadden Sea Region	40		
5.1.1 The Vision	40		
5.1.2 The Strategy	40		
5.1.3 Obstacles	41		
5.1.4 Recommendations	42		
5.1.5 Projects	43		
5.2 Sustainable Fisheries in the Wadden Sea Region	44		
5.2.1 The Vision	44		
5.2.2 The Strategy	44		
5.2.3 Obstacles	45		
5.2.4 Recommendations	46		
5.2.5 Projects	46		
5.3 Sustainable Energy in the Wadden Sea Region	48		
5.3.1 The Vision	48		
5.3.2 The Strategy	48		
5.3.3 Obstacles	50		
5.3.4 Recommendations	50		
5.3.5 Projects	50		
5.4 Sustainable Industries/Harbours in the Wadden Sea Region	52		
5.4.1 The Vision	52		
5.4.2 The Strategy	52		
5.4.3 Obstacles	54		
5.4.4 Recommendations	54		
5.4.5 Projects	54		
5.5 Sustainable Tourism in the Wadden Sea Region	56		
5.5.1 The Vision	56		
5.5.2 The Strategy	56		
5.5.3 Obstacles	57		
5.5.4 Recommendations	58		
5.5.5 Projects	58		
6. Outlook	61		
6.1 Introduction	62		
6.2 Tasks of a future forum	62		
6.3 Participation	63		
6.4 Structure	63		
6.5 Meeting frequency	63		
6.6 Facilitation	63		
Annex 1: Complete List of WSF Shipping Recommendations	66		
Annex 2: Members	70		

Contents



Introduction

01.

1.1 Why a Wadden Sea Forum?

The trilateral Wadden Sea Forum (WSF) is a platform of stakeholders from the Wadden Sea Region. The main reason for establishing a Forum was the wish of many inhabitants of the Wadden Sea Region to become more actively involved in the activities of the trilateral cooperation on the protection of the Wadden Sea. Since 1978, the trilateral cooperation has been dealing with the joint protection of the Wadden Sea ecosystem. The trilateral cooperation between Denmark, Germany and the Netherlands is based upon the shared conviction that the Wadden Sea is a unique nature area of international importance. In 1991 the overall goal for the protection of the Wadden Sea was defined, stating that "The Guiding Principle of the trilateral Wadden Sea policy is to achieve, as far as possible, a natural and sustainable ecosystem, in which natural processes proceed in an undisturbed way." In 1997 a common management plan for the Wadden Sea Area, the Wadden Sea Plan (WSP), was adopted. The main objective of the WSP is to implement the trilateral Wadden Sea Targets. These Targets are about the protection and restoration of the Wadden Sea ecosystem and the protection of landscape and cultural history. At the same time, however, the WSP acknowledges that the Wadden Sea area is an area where people live, work and recreate. This is reflected in the Shared Vision of the WSP, in which it is stated that economic and social values should also be maintained and enhanced.

It was felt that there was an imbalance between nature protection and the social and economic development of the Region and that nature protection rules and regulations would hamper socio-economic developments. On the other hand it was felt that the development of the Region is not yet sustainable and that there are still economic developments, which are inconsistent with the protection goals for the Wadden Sea.

With the establishment of an independent platform, the Wadden Sea Region stakeholders have been given a better opportunity to present their views on the future of the Region, taking account of ecological, social and economic aspects, in other words, a sustainable development perspective for the Wadden Sea Region.

1.2 The tasks of the Wadden Sea Forum

The decision of the 9th Wadden Sea Conference, Esbjerg, 2001, to establish a Wadden Sea Forum, was worded as follows:

99. 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. The results of the work of the Forum will be presented to the 10th Trilateral Governmental Conference.

The precise tasks of the Forum, as spelled out in Annex 6 of the Esbjerg Declaration, are:

"to elaborate proposals for sustainable development scenarios and strategies for their implementation, to be presented to the 10th Trilateral Governmental Wadden Sea Conference, as a contribution to the further development and possible amendments of the trilateral policy and management and the trilateral projects of the Wadden Sea Plan.

For the development of the scenarios it is necessary to address, amongst others, the following main issues:

1. The evaluation of present uses (including small-scale domestic uses) for sustainability in relation to present and future conservation and nature development goals.
2. The identification of the main conflicts between uses and the present and anticipated future status of the Wadden Sea ecosystem.
3. An inventory of long-term perspectives of economic, social and ecological development.
4. An inventory of management proposals, which are best, adapted to long-term perspectives.

On the basis of the above assessment, common views, and, if this is not possible, alternative (sub)scenarios, should be developed. The scenarios should include, for different time scales, specific steps for different activities, management tools, approach, implementation and priorities."

1.3 Composition and Way of Working

The Forum was chaired by Mr. Nijpels, Queen's Commissioner of the Dutch Province of Fryslân. Vice-chairs were Mr. Klimant of the German Kreis Dithmarschen and Mr. Andresen of the Danish county South Jutland.

The members of the WSF represent local and regional governments, the sectors of agriculture, energy, fisheries, tourism, industry/harbour and nature protection from the Netherlands, Lower-Saxony, Schleswig-Holstein and Denmark. The members of the WSF are listed in Annex 2.

The Wadden Sea Forum work has been carried out as a project with support from the Interreg IIIB programme. In the period August 2002 - February 2005 six plenary Forum meetings were held. The WSF was supported by Thematic Groups on agriculture, energy, fisheries, industry/harbour and policy/management. In addition eight external studies were commissioned while a consultant for scenario development supported the scenario development work.

The external studies were about legal and management matters (Review of legal instruments, Review of EIA, Sustainable development, Shipping safety) and the socio-economic situation and perspectives in the Wadden Sea Region. All studies are available as printed reports.

All the proposals of the Wadden Sea Forum have been discussed in regional conferences, one in each of the four parts of the Wadden Sea Region. The regional conferences were attended by a total of 274 participants and the results of the discussions have been integrated in this Final Report.



Nature and Environment

Hans Revier

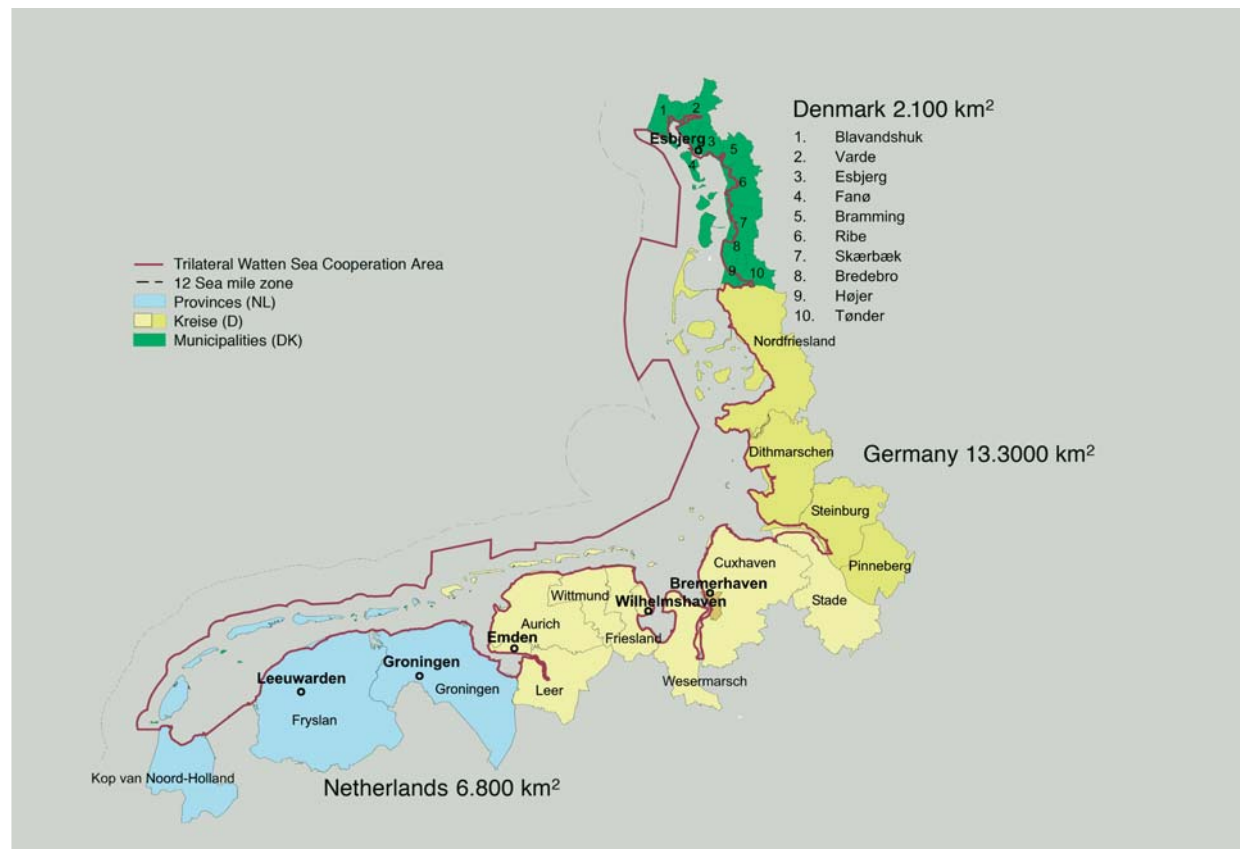
Seas at Risk

An open mind. *'Most of these forum members still remember the time when they met in court to defend their opposing views. Nevertheless, we managed to escape from this ritual dance of sticking to your own beliefs, no matter what. We have a common starting point. No one wants the Wadden Sea fenced off.'*

The others. *'The VNO-NCW can be extremely satisfied. In the presence of nature organisations there was a successful discussion on economic developments.'*

'The benefit of the doubt.'

1 2 3 4 5 6 7 8 9 10



The Thematic Groups met five times in the period February 2003 - March 2004 and have produced scenarios for the Wadden Sea Region, to be used as benchmarks in the development of sustainable development strategies.

There is full documentation of the scenario work in the separate Documentation Report.

On the basis of the scenarios, the Thematic Groups have prepared draft sector strategies, which have been further discussed and specified by the plenary Forum meetings.

The sector strategies are included in Chapter 5.

The Wadden Sea Forum has furthermore addressed the topical issues of offshore wind energy, international cooperation of shrimp producers, safety of shipping, infrastructure and coastal protection. The results of the discussions are part of the respective sectoral strategies. The issues with an overarching character, i.e. shipping safety, coastal protection and infrastructure are presented in Chapter 4.

The central element in the WSF discussions has been the future sustainable management of the Region and the role of stakeholders therein. The outcome of these discussions, i.e. Wadden Sea Region sustainability aims and a structure for implementing the sustainable strategies, is presented in Chapter 3.

Chapter 2 provides a general introduction to the Wadden Sea Region with respect to socio-economic developments, nature and environment, landscape and culture and rules and regulations. This Final Report is the result of a two-year period of intensive discussions and negotiations between the main Wadden Sea Region stakeholders. This process has been characterized by the will of the participants of the Forum and the Thematic Groups to reach agreement on a common approach to sustainable development of the Wadden Sea Region through consensus.



'The edge has gone.'

Stability. *'Fishermen and businesses need security and continuity. The long-term fishing licences and the forum's forward-looking views will ensure this. Moreover, you cannot achieve anything on your own. If we want to continue to eat our own produce, it has to be affordable. Our practise deserves appreciation.'*

The others. *'Tourism is booming. The message is to keep the area traditional. Nice, but obviously fishermen don't want to stay in dock and pose as a museum piece.'*

Fishery

Andries de Leeuw

Landesverband Schleswig-Holsteinischer Angler und Fischer e.V.





**The Wadden Sea Region
in Perspective:**

Status and Developments

- One coherent landscape heritage, which is unique world-wide
- Moving the economy towards innovation and qualification
- Broad integration of all stakeholders must be a basic principle

02.

2.1 The Wadden Sea Region

The Wadden Sea extends from Den Helder (Netherlands) to Esbjerg (Denmark) along the North Sea coast.

In the terms of reference of the Wadden Sea Forum (see chapter 1) the scope of the Forum has been defined as being the Wadden Sea Area. In the Shared Vision of the Wadden Sea Plan, the importance of the relationship with the adjacent areas as a basis for integrated management is underlined. The geographical scope of the Wadden Sea Forum, hereafter called the Wadden Sea Region, therefore also includes the adjacent mainland (provinces in the Netherlands, Kreise in Germany and municipalities in Denmark) and the coastal zone up till the 12-sm border (see map on page 10).

The "Wadden Sea Area" is part of the Wadden Sea Region (see map) and is the geographical range of the Wadden Sea Plan of the three countries. Within the Wadden Sea Area there is the Conservation Area, which consists of the Wadden Sea national parks and nature reserves.

The urban centres of Hamburg, Bremen, Oldenburg, Leeuwarden and Groningen are not located directly on the coast. Nevertheless, the Wadden Sea Region is affected by the forces of attraction and spin-off effects of these large cities. This primarily relates to aspects such as population, education, employment, settlement, traffic and communications as well as important infrastructure facilities such as harbours, airports and universities.

2.2 Nature and Environment

A substantial part of the Wadden Sea Region, the Wadden Sea Area, is one of Europe's outstanding wetland areas, stretching from Blåvandshuk in Denmark to Den Helder in the Netherlands. It consists of tidal mud flats and shoals, open sea areas, channels and estuaries, barrier islands, dunes and salt marshes and fertile marshlands, the latter mostly lying behind the dykes. The Wadden Sea provides a multitude of transitional zones to the land, the sea and the freshwater environment, which is the basis for an exceptional species richness. It is a very important breeding area for many species of coastal and meadow birds. With an average of 10 million birds passing through this area, the Wadden Sea Area is one of the world's most important wetlands for migratory waterbirds. Because of the international importance of the Wadden Sea Region as a nature area, large parts are protected under national and international laws and associated management schemes. The mainland part of the Wadden Sea Region is characterized by fertile marshes with an important function as feeding areas for migratory birds and breeding areas for meadow birds.

The Wadden Sea is an excellent example of a coastal wetland. With about 14,000 square kilometres it contains the largest unbroken stretch of intertidal mudflats in the world, and is the perfect example of a coastal wetland with high biological, hydrological and ecological importance, shared between three countries. It is the only major coastal wetland in Europe where almost all natural geomorphologic and biological processes still take place. The area is of international importance as a staging, wintering, moulting and foraging area for many bird species, in some cases, such as for dark-bellied brent goose or knot, even hosting the entire populations. The full range of habitats typical of a tidal flat ecosystem is represented. The site hosts a large number of threatened, heavily endangered, and endangered biotopes and numerous vulnerable, endangered or critically endangered animal and plant species. Amongst them are rare and endangered marine macroalgae and vascular plants, macrofaunal benthic invertebrates, fish, amphibians, reptiles, birds and marine mammals. The Wadden Sea hosts around 250 endemic species, mainly aquatic invertebrates. The site exhibits a large biodiversity. For example, it harbours over 2,000 indigenous invertebrate species. The area is the most important nursery ground for the regional population of the globally vulnerable common seal.

Apart from all these scientific points, it is an area eminently suited for the simple enjoyment of being in a natural environment. There is hardly any other place in Europe where it is equally possible to

experience the quiet, the changing of the seasons, the vast open spaces, the continuous movement of the tides and the weather in all its variability.

Improving environmental quality

After a severe deterioration of the quality of water, air and soil in the 1960s and 1970s, there has been a gradual improvement in the past 20 years as a result of the introduction of a broad spectrum of environmental rules and regulations. Substantial improvements in fresh water quality have been achieved in the past decades, mainly through urban and industrial sewage treatment and measures in agriculture. This improvement concerns in particular organic pollution (BOD), phosphates, and pollution with heavy metals, PCBs and some pesticides. For nitrogen, many measures have been taken, but there are still nitrogen surpluses in large parts of the Wadden Sea Region. Further improvements are expected with the implementation of the Water Framework Directive.

Problems for biodiversity

Biodiversity has changed and is still changing significantly due to climate conditions and human use. Oyster beds (*Ostrea edule*) completely disappeared as long as a century ago, probably due to the combined effect of over fishing and external factors such as changes in climate. Extensive eelgrass beds in the western Wadden Sea ceased to exist after the building of the enclosure dam (Afsluitdijk) in 1932 and a complete herring variety (Zuiderzee herring) disappeared with it. Migrating fish species such as fint and elft almost vanished due to the numerous dams, pumping stations and sluice gates that were built to stop the rising seawater and storm waters and have a better control of inland water levels. Highly commercial, migrating species such as eel may not survive the next century, and non-commercial species such as sticklebacks - the base food of, for example, spoonbills - were severely reduced, as was their predator, by all this infrastructure. Bird species show a variable pattern. Hunted in the past for their eggs and feathers, some species increased strongly after the phasing out of hunting. Some are still under severe pressure due to reduced breeding success and insecure food resources. Interactions with tourism, fishing and farming of shellfish play a role, as well as natural causes. Some species are still hunted in parts of the Region or elsewhere in Europe. Recent investigations in the Netherlands, Denmark and Germany confirm the general picture of declining populations of bird species, which are typical for grassland areas. This development is generally attributed to the loss or degradation of habitats as a result of the intensification of agriculture,



Nature and Environment
Svend Tougaard
Den Danske Vadehavsgruppe

Rapprochement. *'Black and white thinking is a thing of the past. Quiet discussion helps people get off their hobbyhorses. They maintain their opinions less obstinately. The feeling that we are fighting problems together makes the urge to win fade away. Fishermen and nature conservationists basically use the same definition of sustainability.'*

The others. *'No one achieved an optimum result. Everyone made sacrifices to reach the joint result.'*

'Being forced to find solutions pays off.'



infrastructure, urban and industrial developments.

Also indirect causes play a role.

Toxicants such as PCBs were hampering the reproduction of the common seal and cormorant populations until the late eighties. Turbidity and nutrients have increased since the sixties and are now declining giving rise to new variations in biodiversity and carrying capacity.

With regard to the quality of natural habitats, the natural quality of estuaries in particular has degraded, mainly due to harbour and industrial activities.

Future threats

On the mainland a continuing threat to biodiversity is the further decrease and degradation of habitats as a result of climate change, further specialisation of agriculture, and continued increase of traffic infrastructure and industrialisation. In the Wadden Sea the proliferation of new species, mainly as a result of new conditions caused by increasing water temperature, ballast water and introduction by man may pose future problems. A topical example is the Pacific oyster, which is spreading rapidly in the area, thus threatening other shellfish species.

Future water quality problems with new hazardous substances may arise. Endocrine disruptors are substances that have a disruptive effect on hormonal processes in organisms including man. PCBs and Tributyltin (TBT) are examples of endocrine disruptors, the production and use of which are being or have been phased out or strictly limited. Since the 1990s, harmful effects of several other endocrine disrupting compounds in the aquatic environment have been detected.

In addition, the Wadden Sea faces a potentially increasing risk of shipping accidents due to developments in the shipping sector (e.g. insufficiently trained crews, sub-standard ships, inadequate salvage capacity) and large-scale artificial constructions (e.g. offshore wind turbines).

Another future threat is a potentially accelerating sea level rise, which may, on the one hand, have an impact on the Wadden Sea ecosystem itself (decrease of tidal flats, coastal engineering structures and modifications) and, on the other hand pose an increasing burden on coastal protection and the safety of the hinterland.

2.3 Socio-economic developments

Decrease of Population

In 2000 the Wadden Sea Region had a population of 3.7 million (including Groningen and Leeuwarden, excluding Oldenburg, Bremen and Hamburg). One in a hundred citizens of the European Union lives in the Wadden Sea Region. The demographic development within the Wadden Sea Region has a great impact on the overall development of the Region. On the one hand, a growing population would put greater pressure on land use and natural resources. On the other, the development of the population – especially that of working age – is important for the development of business and income to the Region.

According to Prognos (The Wadden Sea Region: A Socio-Economic Analysis, Prognos, 2004) the population forecast for the Wadden Sea Region indicates the start of population stagnation. Until 2010, the population will, with an estimated number of 3.3 million inhabitants, stay almost at the same level as in the year 2000. Subsequently the population will decrease and fall below the level of 1995 until 2020.

Insufficient Human Resources

For the economic and social future of the Wadden Sea Region, schooling and vocational education play a substantial role. The personal qualifications of individuals greatly determine their career opportunities as well as incomes and standard of living. According to Prognos, the work-force requirements for simple activities will decrease further over the next twenty years, as the need for more highly skilled activities will rise. Employees lacking qualifications will have an even bigger professional disadvantage in future.

In general, the level of education in the Wadden Sea Region is comparable to that of the respective countries as a whole. There are differences, however, primarily concerning highly qualified employees (those with a college or university degree), the level of which is substantially lower than nationally. The relatively low share of highly qualified people is a comparatively poor starting point for the projection that jobs will become ever more knowledge-intensive. In addition the sectors considered to offer the most growth in the future are those requiring a high proportion of highly qualified employees.

In this context the Wadden Sea Region seems not optimally prepared for the expected knowledge-oriented structural change of the economy.

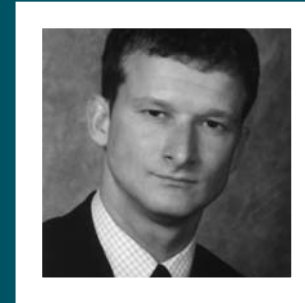
Economy: low innovation

The economy of the Wadden Sea Region, like that of the rest of the respective countries, is dominated by industry and service. Around two-thirds of those employed in the Wadden Sea Region work in the service sector, which includes the entire public sector and the tourism and recreation sector. However, agriculture, fisheries and transport play a somewhat more important role in the Region than in the rest of the countries. In addition, the public sector, comprising public administration, education and health care, is more important for employment in the Wadden Sea Region than it is nationally. In comparison to national figures the economic structure is mainly aimed towards low and medium-tech markets (metal products, the food industry, agriculture). High-tech markets are underrepresented. Due to the economic structure of traditional industry sectors the Wadden Sea Region is handicapped by a weak sector-specific growth (Prognos, 2004). Innovative activities by companies are relatively low, new products and processes are under-represented.

Structural changes and regional cooperation needed

Prognos (2004) estimates that, overall, international competition with regions where the availability of qualified work forces with very low wages is a central location advantage will increasingly affect the rural areas of the Wadden Sea Region. The regional development policy then has the difficult task of moving the economy towards innovation and qualification-oriented structural change. Therefore rural areas, with their predominantly medium-sized enterprises and rather traditional structures, possibly need to undergo a process of adjustment, which will protect them and prevent them from falling further behind. However, as with all future projections, there are many uncertainties and also, as shown in one of the scenarios developed in the Thematic Groups, a future situation may develop which is more favourable for sustainable rural development and small enterprises.

The Wadden Sea Region consists of three nations and different sub-regions with a local focus and is thus a very heterogeneous area. In general it is important that regions develop their own specific strengths. Future development strategies for the Region will have to take these regional differences into account by ensuring efficient co-ordination and division of labour between the different regional political levels. For regional development strategies in particular, the broad integration of all stakeholders relevant for regional policy must be a basic principle.



Energy

Frank Oswald

Wilhemshavener -

Hafenwirtschaftsvereinigung e.V.

Dialogue. *'People are talking to each other, and that in itself is exceptional. The fog has cleared and messages are better received. Subsequently, the only way to go forward is to compromise. That isn't a sign of weakness. On the contrary, it shows a sense of reality and is worthwhile.'*

The others. *'The close contact is starting to bear fruit. People don't regard each other as opponents anymore, which eliminates the need to get your way in everything. I also notice that for myself.'*

'A 3 for contents, a 7 for collaboration.'



2.4 The Cultural Landscape under Transformation

The cultural landscape of the Wadden Sea Region is one coherent landscape heritage, which is unique world wide. Man has shaped this landscape through many hundreds of years into today's landscape. From every period the evidence of the forming of this landscape and the struggle with the environment to establish and maintain a living can be observed. Thousands of dwelling mounds and extensive reclamations and water management systems bear witness to this exceptional heritage. The significant changes of the coastline of the Wadden Sea since more than thousand years ago are historically linked to coastal protection and land reclamation including the building of sluices to ensure the drainage of the hinterland. Changes have always been part of the landscape development in the Region. It is now, however, under rapid transformation due to developments caused by the extension of the urban and industrial areas, changes in agriculture and the depopulation of the rural area in a way that may significantly change part of the inherent features of the heritage. This heritage is worth maintaining because it is an integratal part of what makes the Region attractive and has a great potential for further use. This can partly be done through policies and planning by governments. A chief responsibility, however, lies with the owners of the landscape. Only with their collaboration can the landscape be managed and developed in a such a way that in the future the typical Wadden Sea cultural heritage will still be visible and available for agricultural, educational, recreational as well as regional identity purposes.

2.5 Many Rules and Regulations, Many Layers of Government

The Wadden Sea is subject to many rules and regulations and comprehensive protection schemes now cover the entire coastline from Den Helder to Esbjerg except for the main shipping lanes. The Wadden Sea Conservation Area undoubtedly constitutes the most comprehensive protection scheme in Europe and one of the most far reaching world wide. European environment legislation, such as the Habitats and Birds Directives, plays an increasing role and will continue to play a dominant role. According to the directives, all activities are made subject to an appropriate assessment. In a case where a significant impact is established, the rule is basically that the activity or project must not be permitted unless there are no other alternatives and the project is necessary for imperative reasons of overriding public interest. While these directives safeguard the European natural heritage in a comparable way throughout the EU they also make decisions on activities in and adjacent to the area more complicated compared to other areas where no such regulations apply. In general, the situation in the Wadden Sea coastal area can be considered complex in terms of rules, regulations and competencies. One example is that the key environmental directives are not being applied in a uniform way in the Wadden Sea Region. Other examples relate to a lack of coordination between those rules and that there are many different terms for the individual protected sites. Furthermore, other regulations can only be introduced by international law, such as rules that regulate shipping outside the territorial sea. There is a need to approach the management of the coastal area in a more uniform and simple way that takes account of the economic, social and environmental dimensions. With regard to nature protection this has to some extent been successfully solved in the German Wadden Sea, where lots of these sites and individual regulations have been combined.



Agriculture

Erich Hinrichs

Landwirtschaftlicher Hauptverein Ostfriesland

Focusing *'We now know exactly what the economic and social structure is of the area. Population, livelihood, expectations. Knowledge of these characteristics is important for (raising) awareness. The agricultural people I represent have also looked at development for the next 15 years. Land use planning and related agreements with conservationists are matters that stand out. I will commit myself to shaping their contents.'*

The others: *'Shipping safety has always been important. But now the forum has put this on its own agenda, the topic receives more attention and esteem. Concrete steps were taken. And that's something to be proud of.'*

'To further progress critical questions were avoided.'



'Sterility gives way to use.'

Realistic. *'Slogans like 'the last wilderness' are outdated. Human interference has made the Wadden Sea what it is today. Use the area, but with the necessary care. Despite their different cultures Germany, Denmark and the Netherlands are agreed on this.'*

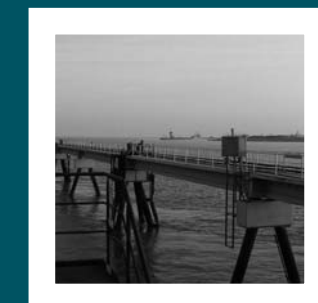
The others. *'The search for all-inclusive solutions does not yet lead to uniform regulations as often as is desirable. When the Germans and Danes suggest a different way of working, the Dutch rules may not allow this.'*

Fishery

Ton Verbree

Productschap Vis

P.O Mosselen and stichting Odus





The Future of the Region

- The Wadden Sea Region has a strong unique identity
- Room for entrepreneurship and optimal use of regional advantages
- All parties and sectors respect the Ecological Targets

03.

The Wadden Sea Forum has adopted the concept of sustainable development as the basis for the future development of the Wadden Sea Region. The concept of sustainability entered into political parlance when the Brundtland Report was published in 1987. It defined sustainability as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

The concept nowadays represents an attempt to balance and integrate economic, social, and environmental concerns. Earlier, it was primarily considered to be a substantial concept which stated a desired destination (something to be achieved) but now is increasingly seen also as a procedural concept: a learning process and rules for how we make decisions.

Both aspects of sustainable development, the substantial and the procedural, have been comprehensively discussed by the Forum. The results are presented in the following.

3.1 Vision and Objectives

The Wadden Sea Forum has developed a vision for the Region and, on the basis of the vision, formulated sustainability objectives for the three dimensions of sustainable development, the social, the economic and the ecological dimension.

Vision

The Wadden Sea Region has a strong identity, which is rooted in the cultural heritage, the typical Wadden Sea landscape features and the unique, from a world wide perspective, Wadden Sea nature area. The Region has a natural biodiversity and decreasing concentrations of polluting substances.

The Region is characterized by dynamic urban centres and a vital rural community with a balanced population structure and good public facilities. The Wadden Sea Region offers room for entrepreneurship and economic activities make optimal (i.e. sustainable) use of the specific advantages of the Region, in particular the location by the sea, the nature potentials (agriculture, tourism) and the positive population development.

In general people like to live in the Wadden Sea Region.

For the Wadden Sea Area, which is the area covered by the Trilateral Cooperation on the Protection of the Wadden Sea, the trilateral Targets represent the ecological objectives. The Area has an unspoilt beauty, is understood as a joint heritage of the entire Region and the ecological Targets are respected by all sectors. The sustainability objectives have been the basis for the

elaboration of more specific aims for the overarching issues of infrastructure, shipping safety and coastal defence (Chapter 4) and for the sectors of agriculture, energy, industry and harbour, fisheries and tourism and recreation (Chapter 5).

3.2 A Wadden Sea Region Coastal Zone Management Strategy

The Wadden Sea Forum has identified several common issues, relevant for all sectors, which are basic elements for the procedural aspect of sustainability.

These elements can be summarized as follows:

- Integration and implementation of sectoral strategies.**
 There are many interactions between the proposed sustainability strategies of the sectors (e.g. agriculture and tourism, offshore wind energy and fisheries or the common use of a Wadden Sea label for Wadden Sea products). The implementation of the sectoral strategies needs therefore be carried out in an integrated way.
- Integration with regard to policies/activities in the Wadden Sea and the adjacent mainland.**
 The Wadden Sea Forum stresses that there are many interactions between the Wadden Sea and the adjacent mainland and that a sustainable development strategy for the Wadden Sea Region must integrate policies for the Wadden Sea proper and the adjacent mainland.
- Cooperation between responsible authorities**
 There is still insufficient or lacking cooperation between local, regional, national and EU authorities in the preparation, implementation, enforcement and coordination of rules and regulations in the Wadden Sea Region. A sustainable development perspective for the Region requires better and intensified cooperation between responsible authorities.
- Harmonisation and simplification of rules and regulations**
 The Wadden Sea Forum has identified several cases of substantial differences in the implementation of rules and regulations within the Wadden Sea Region (e.g. with regard to the EU EIA Directive). In order to facilitate sustainable development, rules and regulations should be harmonised and, where possible, simplified. Moreover, some rules and regulations could be superfluous, redundant and neither contribute to the protection of nature nor the improvement of social and economic conditions.

ISSUE	OBJECTIVE
OVERALL	
Safety	Safety at sea Safe living conditions and economic development through coastal protection Protection of the landscape and nature against hazards
SOCIAL	
Cultural history	Preserve landscape and culture Trilateral landscape and culture Targets
Demography	Balanced population structure
Education, research & development	Keeping the younger generation in the Region Perspectives for young people
Employment	Safe working environment. High-quality and diversity of employment
Health (physical + mental)	Good provision of medical care Clean environment
Housing	High property rate Sufficient apartments for reasonable price
Lifestyle	Right to the free development of one's life Better than in rest of country
Local engagement	Local citizens are engaged and participate in local activities. Use of local knowledge
Recreation/ attractions for citizens	Agriculture as recreation option Fisheries as recreation option
Regional identity	Feeling proud of being from the Wadden Sea Region. Production in the area Good image sector
Social institutions in rural areas	Availability and accessibility of school, hospitals, commercial institutions (banks, shops, child-care, etc.), also in less densely populated areas
Welfare	Constant or increasing income Social equity Feeling like home (Heimat)

ISSUE	OBJECTIVE
ECONOMIC	
Economic resilience: Maintain and develop economically viable and Region related activities + Use natural opportunities and natural qualities of the Region	Economic activities rooted in the Region Complete chain of activities Responsible entrepreneurs: • Innovation • Jobs • Profit Simplification and harmonisation of laws and regulations More added value Energy efficiency and reliability
Harbour	Harbour activities respecting other sector activities Harbour cooperation in the Region
Infrastructure	Optimal accessibility for production and transport
Energy	Stable energy supply
Rural development	Economic vitality
Sea traffic	Better efficiency
Tourism	New tourism enterprises Quality tourism Broadening of spectrum of tourist attractions (nature, cultural heritage, recreation on farms etc.)
ECOLOGIC	
Biodiversity	Maintain natural biodiversity
Contamination/pollution	Decrease of emissions of polluting substances
Darkness and silence	No unnecessary lights and noise
Global responsibility Nature and environmental management and regulation	Understanding and respecting the global biodiversity importance of the Wadden Sea Area Implementation of relevant national and international regulations for protection All activities according to Best Environmental Practice
Wadden Sea	Compliance with the Guiding Principle of the trilateral Wadden Sea co-operation: Trilateral Targets

- **Involvement of stakeholders in the sustainable management of the area**

While acknowledging that public participation in policy and management already exists on many levels, it is one of the central wishes of the Wadden Sea Forum to further enhance bottom-up processes wherever possible and as far as compatible with the principles of parliamentary democracy. In order to create a sound basis for the implementation of sustainable development strategies, stakeholders must be actively involved in this process.

The Wadden Sea Forum considers the concept of Integrated Coastal Zone Management (ICZM) as the ideal instrument for dealing with the above elements in a consistent and pragmatic way. The WSF Final Report, including its strategies, recommendations, actions and policies, is to be regarded as an Integrated Coastal Zone Management Strategy for the Wadden Sea Region and should, as such, be used as the starting point for the integration of the national ICZM strategies, developed within the framework of the ICZM Recommendation of the EU Council and Parliament.

3.3 Recommendations

- The main recommendation of the Wadden Sea Forum is to adopt The Wadden Sea Forum Final Report as an important contribution to Integrated Coastal Zone Management Strategy for the Wadden Sea Region
- The Wadden Sea Region ICZM strategy should be the basis for the integration of the national ICZM strategies of the Wadden Sea states
- The Sustainability Objectives from the Wadden Sea Region ICZM Strategy should be further specified by defining proper indicators for each Objective
- An inventory and assessment must be carried out of rules and regulations in the Wadden Sea Region with a view to their harmonisation and simplification. On the basis of the assessment a target must be set for the reduction of the number of rules and regulations.
- Active support for Wadden Sea education programmes for schools and universities, including international exchange programmes.



Nature and Environment

Hans-Ulrich Rösner

WWF Projektbüro Wattenmeer

Meaningful. *'The legal protection of the Wadden Sea is not an obstacle for the future, it is what democratic societies have chosen to be the right thing to do with this wonderful nature area. This should also be seen as an opportunity to work together. From my own experience I feel that people have really found each other.'*

The others. *'The parties still have quite different wish lists. However, there is now also an agreement in principle about the direction to be taken.'*

'It was a beginning, which can be and should be further improved.'





Overarching Issues

- Infrastructure as a sound basis for social and economical development
- What is needed are better east-west connections
- Anticipate the impacts of sea level rise
- Discuss possible interventions with the inhabitants of the Region
- Shipping safety is extremely relevant for the protection of this sensitive sea area
- Further development of measures to prevent pollution and marine disasters

04.

4.1 Infrastructure in the Wadden Sea Region

4.1.1 Introduction

Infrastructure in general is an important precondition for the economic and social welfare of a region, also in order to avoid isolation of remote areas. Traffic infrastructure is essential for the production and exchange of goods, provision of services and transport of persons. In highly developed industrial countries, such as the Wadden Sea countries, a modern traffic infrastructure plays an important role for the overall business cycles. The demand for transport connections is related to the access to people, places, goods and services. Freight transport is closely linked to economic growth as well as to trade between the countries and regions. Also social infrastructure such as administrative bodies, schools and other educational institutions, child-care institutions, leisure facilities and the whole cultural structure is a prerequisite for sustainable development of the region. The maintenance and development of this network should be of high priority. The same holds for the infrastructure of telecommunication, energy and water supply, which should be a basic element in development strategies of the Wadden Sea Region (WSR). A balance is needed between the development of infrastructure and nature/environmental protection as a prerequisite for a sustainable development of the WSR.

4.1.2 Objectives

The objective for the development of infrastructure in the Wadden Sea Region is to ensure a healthy economic and social development while paying due attention to the importance of transport safety and environmental protection. There are three main elements in the provision of a sustainable infrastructure:

- a) an infrastructure analysis for understanding the community's need for physical infrastructure, related services and planning as well as to cost effectively meet those needs.
- b) infrastructure planning and implementation for designing and constructing the required physical infrastructure projects.
- c) infrastructure maintenance of existing and new implemented measures and provision of related services on an on-going basis.

In the Wadden Sea Region, several measures with regard to water, air, road and rail transport have to be considered for implementation to achieve a sound basis for the sustainable development of the region. A general aim is to improve the accessibility to and within the Wadden Sea Region. Social, cultural and supplying infrastructures such as logistics systems are

considered to be basic elements, which are to be taken into consideration in any planning and development process. In this regard it is important to investigate the possibilities of providing integrated transport services: tourists, for instance, would probably be more willing to use public transport if they did not have to worry about their luggage (because it would be delivered to their holiday address) and if they were assured of reasonably fast transportation to their final destination with good connections and no unnecessary waiting time.

Housing and living

New forms of living may play an increasingly important role in the Wadden Sea Region, not only for the inhabitants but also as an economic factor. The open space, the quietness and the nature qualities of the Wadden Sea Region offer several advantages and opportunities for new forms of high quality living (for example living with water, living with farm animals, living for seniors) which may attract new inhabitants to the Region.

Harbours and waterways

Harbours and related waterways have a great importance for the Wadden Sea Region. Therefore, the maritime infrastructure has to be given appropriate attention. The three biggest ports of the Wadden Sea region are Bremerhaven, Wilhelmshaven and Hamburg (containers, see Section 5.4). In addition, there are some smaller and medium-sized ports that have specialized in certain niche market or products categories according to the economic structure of their region (chemicals, automobiles, fish, salt, bulk goods, roll-on-roll-off, offshore). Some ports play an important role for the different sectors, but smaller harbours too are of vital significance for the region and have to be integrated in the development of harbour and waterway infrastructure. Furthermore, the offshore industry has a promising future and harbours will function as a basis for this development. Of course, there are also differences between various ports due to their location: some have continuous deep-water accessibility, others are situated where access is regulated by the tides or by other factors. A sustainable harbour development takes these restrictions into account and will avoid unnecessary impacts on nature and environment. Harbours and shipping routes should be optimised and maintained in order to provide accessibility and to keep the harbours alive. This is also an import issue for proper short sea traffic in the WSR. In this context, adequate inland waterway infrastructure is also of great importance. The well built inland waterway network,

particularly in the Dutch-German border region, provides high potential for reloading cargo from lorries to barges, but there are still some bottlenecks. For a sustainable infrastructure, an extension of the inland waterway network should be considered, amongst which an extension of the Dortmund-Ems-Channel, the lock system of the Weser from Minden to Bremen, the channel from Oldenburg to the river Ems (Küstenkanal) and upgrading of the waterway from Delfzijl to Lemmer. Harbour channels also have an important drainage function for the hinterland. From this perspective too it is relevant to maintain these channels. Furthermore, it is important, particularly for the tourism sector, to secure the existing shipping lanes between the Wadden Sea islands and between the mainland and the islands. Possibilities of "island hopping" by boat can attract more people and contribute to a strong tourism sector. Another element of infrastructure is river crossing by ferries. More and more ferry connections are being discontinued, which destroys the matured relationship and social structure within rural areas. River ferry connections are basic elements of the infrastructure and additionally important as cultural historic elements and must thus be maintained and preserved.

Air traffic

For a rural region, the WSR has a relatively dense network of international airports and flight connections. The airports of Esbjerg and Groningen as well as the nearby international airports of Hamburg, Bremen and Amsterdam are important infrastructure facilities for the Wadden Sea Region's economy and population. Moreover, smaller airfields in the region provide flight connections to many of the islands, locations within the WSR and to main national and cross-border destinations. Further development of air traffic infrastructure could be considered.

Railways

As in other rural areas, the railway infrastructure in the WSR has many deficiencies. The neighbouring metropolitan areas of Hamburg, Bremen and Amsterdam, as well as the major cities such as Groningen, Oldenburg and Esbjerg, are relatively well connected to the national railway systems. But an adequate rail network in the WSR itself does not exist. In particular, the east-west and cross-border connections are inadequate. Even though passenger transport works well on the main routes, freight transport is not adequate at all. The rail network is too small and the frequency of connections is too low.



'Not yet specific enough.'

Protection. *'Ship's safety has finally made it to the top of the list. This has always been important to fishermen. Accidents for them literally are catastrophic. The proposal for a trilateral common coast guard is a good starting point.'*

The others. *'EU regulations obstruct collaboration. Low prices and fierce competition create the need to even out differences.'*

Fishery

Carsten Krog

Danmarks Fiskeriforening



The increasing trade and freight transport requires a much better rail network in the rural area in order to meet the needs of a healthy economy and thriving area. New capacities and high speed connections should be considered between economic hubs, such as the Zuiderzeelijn with extensions to Germany, Poland and Denmark.

The main requirements are:

- east-west and cross-border railway connections to allow for a “Wadden Sea Train”
- adequate freight transport network with regional loading stations
- adequate frequency of connections, both for passenger and freight transport
- harmonised time schedule
- simple, understandable price structure

In order to create new capacities and to prepare the railway network for the forecast increase in cargo traffic, the following concrete projects should be promoted:

- modernisation of the “America-Line” (Wilhelmshaven-Oldenburg-Bremen-Langwedel-Uelzen) including the expansion of the rail interchanges in Oldenburg and Bremen
- new building of the high-speed connection Bremen/Hamburg-Hanover.

Roads

The road network in an industrialized society is generally very good with regard to short-distance connections. This is also true for the WSR, but there are still deficiencies in the accessibility of long-distance traffic. What is needed are better east-west connections and, with regard to harbour developments (e.g. the Jade-Weser-Port, which is currently subject to a planning procedure), a good road and rail network for operating the harbours and for distributing the goods to and from the hinterland. Good connections between the harbours are a basic requirement for implementing a harbour concept.

In order to accommodate new economic developments and increasing traffic, the following measures are planned or under construction:

- improvement of road connection from Heide in SH to Tønder and Esbjerg;
- coastal highway in Lower Saxony (A22);
- Elbe crossing west of Hamburg;
- Weser crossing in Bremen;
- 6-lane extension A1;

- development of the “Centrale As,” the motorway Drachten-Dokkum;
- 4-lane extension of motorway N33 (province of Groningen);
- upgrading of motorways N9 and N99 (province of Noord-Holland).

Energy infrastructure

For a sufficient energy supply for the region as well as for the development of the energy sector itself, a sound energy infrastructure is necessary. Of particular importance is a concept to bring the increasingly produced electrical power from the coast to the main industrial areas in the South. This requires a way to bring cables from the potential offshore wind farms to land, preferably with combined laying of as few cables as possible and using already disturbed areas in and along the estuaries for the cables. In order to meet the demands of the society, infrastructure for the exploitation of primary energy sources as well as for energy generation is necessary (e.g. drilling plants, refineries, renewable energy plants, converters, etc.).

In addition, facilities for energy distribution such as pipelines, gas and other supply lines, cables and high voltage lines are part of the energy infrastructure. In a broader view, long-distance distribution facilities to supply other areas and countries with energy and energy sources are important infrastructure elements.

Pipelines

The chemical, oil and gas industries play a significant role in the WSR. For the transport and distribution of their products (including semi-finished products for further processing), pipeline connections are the most efficient way. Transport via pipelines is safe, environmentally friendly and contributes to the reduction of road traffic. However, the chemical pipeline network to and within the WSR is not adequate. With the implementation of the “chemcoast project”, the chemical industry of Northern Germany should be connected with the European pipeline network (Ruhr area – Wilhelmshaven – Stade – Brunsbüttel) and in a second step with Groningen. This pipeline connection would considerably strengthen the WSR industry. Wherever and whenever possible, pipelines should be clustered.

4.2 Sustainable Coastal Defence Strategies for the Wadden Sea Region

4.2.1 Introduction

About 3.3 million people live in the coastal lowlands of the Wadden Sea region. Without protection, these lowlands could become inundated during severe storm surges. Coastal defence is, thus, a prerequisite for the social and economic development of the region, especially with regard to the expected increase in sea level rise. This demand from the local population is acknowledged in the trilateral Wadden Sea Plan.

Coastal defence measures and structures interfere with nature, for example, the earlier practice of land reclamation. On the other hand, society acknowledges the outstanding ecological value of the Wadden Sea, for example, by the inclusion of major parts of the Wadden Sea in the ecological network NATURA 2000 and the guiding principle of the trilateral Wadden Sea policy, which is to achieve, as far as possible, a natural and sustainable ecosystem in which natural processes proceed in an undisturbed way.

At the 8th Trilateral Governmental Conference on the Protection of the Wadden Sea (Germany, 1997), it was decided to investigate the possible effects of enhanced sea level rise and, on the basis of such an investigation, develop proposals for future integrated coastal defence and nature protection policies. The solutions should, in the long term, help maintaining the existing safety standards and anticipate the expected impacts of sea level rise. At the same time, they should be, at the least, not negative for natural assets, such as natural dynamics and habitat quality. In addition, the solutions should pass a check on technical and financial feasibility, legal aspects, public acceptance, and “harmony” with other interests, e.g. tourism. In 1998 a trilateral expert group, the Coastal Protection and Sea Level Rise group (CPSL), was established to carry out this task. The members of the group represent coastal protection and nature protection authorities in the three Wadden Sea countries. The results of the first phase, carried out in the period January 1999 until June 2001, are described in a report, available at <http://waddensea-secretariat.org/>



Regional Government Authority
Walter Theuerkauf
Kreis Aurich

Across borders. *‘I was pleasantly surprised that the forum has drawn up a concrete programme, which combines the necessary protection of the Wadden Sea with the need to be able to live and work in the area. This also creates a solid, cross-border basis for the political debate.’*

The others. *‘There are no winners or losers. The inevitable compromises are not the end of the story. We need to keep the ideas of the report alive.’*

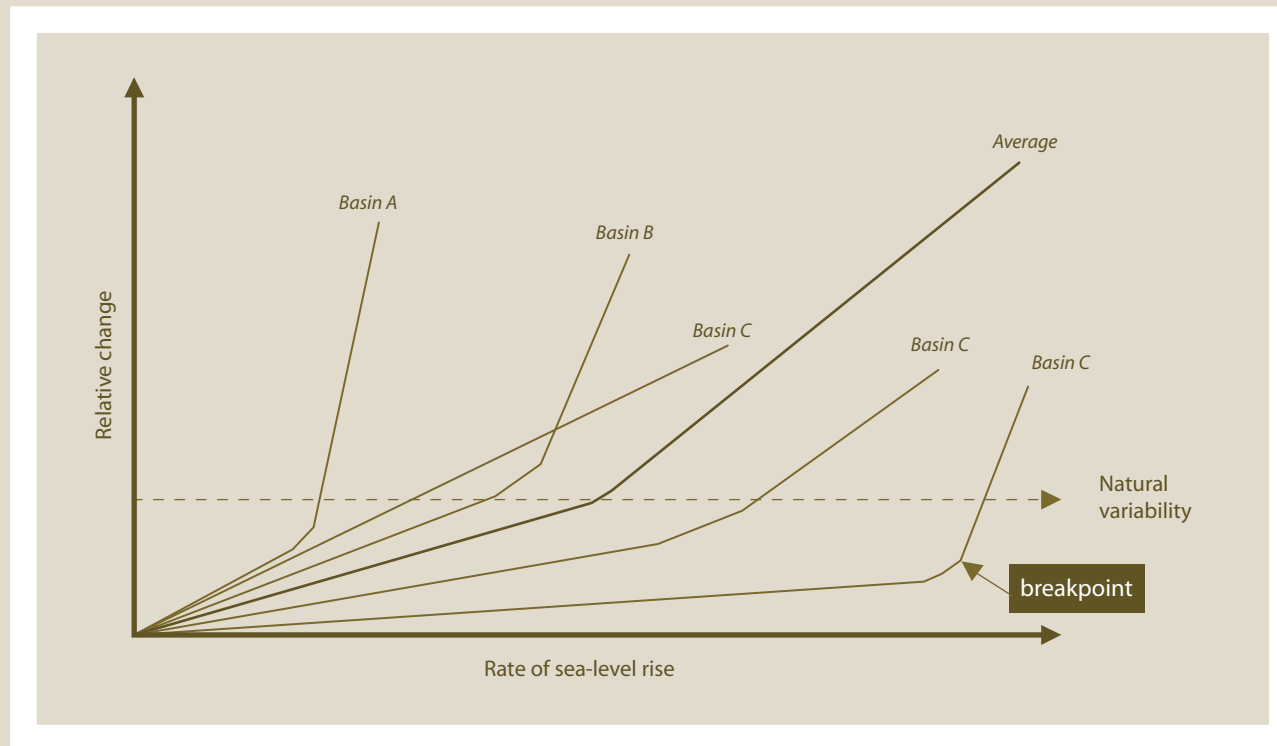
‘Success against expectations.’



4.2.2 Procedure

In the first phase, a common understanding of the Wadden Sea (geomorphology, biology and coastal defence) was established in the expert group. In addition, for three scenarios (sea level rise of 10 cm, of 25 cm and of 50 cm until 2050), the impact upon selected physical, biological, and socio-economic parameters was investigated. At the end of the first phase, a screening of sustainable coastal defence measures – so called “best environmental practices” (BEP) to ensure present safety standards in the future was conducted. The second phase concentrates on the development of selected measures for two scenarios (“below breakpoint”, and “above breakpoint”, see Fig. 1).

Fig. 1: For each tidal basin there will be a point where changes become irreversible and exceed natural variability. From this point, which varies greatly between the basins, an evolution in the direction of tidal lagoons may start.



4.2.3 Results

The CPSL group agreed that the Wadden Sea shows a strong natural variability and has a high natural resilience to changes. Because of strong natural dynamics, changes that exceed natural variability (Fig. 1) will not easily be detected. All parts of a Wadden Sea tidal system (e.g. barrier islands, tidal flats, salt marshes) can be, or strive towards, dynamic equilibrium with the hydrodynamic conditions (currents and waves). Changes in any part of the system will cause a sediment transport to or from other parts, leading to a new dynamic equilibrium. Therefore, a moderate sea level rise in the Wadden Sea, resulting from both natural and man-induced processes, will be compensated by the import of sediment, which, in the long term, derives from the tidal channels and the outer coast. In addition to these hydrodynamic and geomorphological processes the group underlined the importance of biotic processes for sedimentation and erosion. In this respect the relevance of seagrass and mussel beds for biodeposition and reduction of

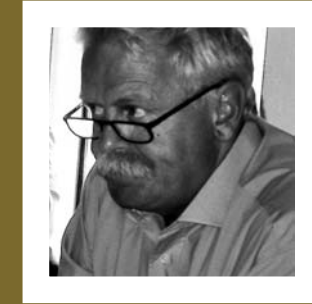
erosion and the role of vegetation in the formation of dunes were emphasised. In summary, for the most realistic scenario (25 cm of sea level rise in 50 years), changes in the Wadden Sea ecosystem (geomorphology and biology) are expected not to be substantial. The costs for coastal defence might increase by 5 to 15%.

For the “worst-case” scenario (50 cm of sea level rise in 50 years) or, rather, above breakpoint, the capacity of the system to balance changes will become exhausted (Fig. #). One of the major geomorphological consequences would be a reduction in the size of the tidal flats. The group estimates that, under the worst case scenario (50 cm/50 years), the size of the tidal flats could decrease by 15% (720 km²), the tidal basins taking on more the character of tidal lagoons (shallow permanent water bodies). An increase in storminess would further enhance this development. These geomorphological changes will, in general, adversely influence the biology. Another consequence might be a doubling of the necessary costs for coastal defence to maintain present safety standards. Although this scenario has a low probability, it cannot be excluded.

At the end of phase one, the CPSL group formulated several recommendations for policy, management and research. The main message regarding policies is that, as far as such is not already the case, integrated policies should be developed for coastal defence, nature protection and economic development in the coastal zone, anticipating impacts of increased sea level and storminess. Such policies should also address strategies for communication with the general public about the expected impacts, and the introduction of additional and new coastal defence measures and strategies.

4.2.4 Outlook

During phase two, the work of the CPSL group focuses on the elaboration of integrated and sustainable coastal defence solutions such as sand nourishment. Key criteria are safety aspects and ecological effects, but other aspects such as cost-benefit and public acceptance are also considered. In addition, the solutions in one part of the Wadden Sea (e.g. a barrier island) should have no adverse effects in other areas (e.g. tidal flats). As the optimal solution strongly depends upon the future development of the Wadden sea (Fig. 1), two geomorphological scenarios: (1) below breakpoint, and (2) above breakpoint) are applied. The results will be available at the 10th Wadden Sea Conference in autumn 2005.



Tourism and Recreation
Steef Engelsman
 ANWB

Accessory. *‘No more damaging extraction or nature-unfriendly shipping. That’s it. Done. Stop fiddling. The forum recognises this and endorses this unanimously. Living, tourism and even fishing offer opportunities for suitable activities and technologies.’*

The others. *‘It is not fair to complain. The area is incredibly beautiful. And nearly all parties can benefit from the associated tourism.’*

‘But if the forum doesn’t prioritise, it will be a seven.’



4.2.5 Policies and Recommendations

- Long-term interdisciplinary policies for coastal defence strategies should be developed with the aim of anticipating the impacts of increased sea level rise and storminess.
- In this context, it is recommended to generally secure the existing coast line in the WSR and to take account of the different exposures of the coast in coastal protection measures.
- Coastal defence measures should be integrated in an overall spatial planning concept and ICZM in order to avoid unsustainable solutions.
- Best Environmental Practice (BEP) measures for sustainable coastal defence strategies should be evaluated and, on the basis of this evaluation, the most relevant and feasible measures selected.
- A communication strategy should be developed with the aim of starting a discussion with the general public about possible future impacts of increased sea level rise and the introduction of alternative coastal defence measures.
- In this context, a project with regard to coastal protection and sea level rise (CPSL II) is running parallel to the WSF project. It is recommended that the results and recommendations of CPSL II be taken into consideration.

4.3 Shipping Safety

4.3.1 Introduction

The southern North Sea is intensively used by shipping and the Wadden Sea area is influenced to a major extent by these international activities. Thus safety in shipping and ship safety are extremely relevant for the protection of this sensitive sea area. Simultaneous shipping, offshore and port activities are important factors for the economy of the region. The designation of major parts of the Wadden Sea as the world's fifth and Europe's first Particularly Sensitive Sea Area (PSSA Wadden Sea) in 2002 was an important step in the joint Danish-German-Dutch efforts to protect the Wadden Sea in respect of impacts from shipping, and provides a good basis for the further development of measures to enhance shipping safety. While acknowledging the high level of safety, which has already been achieved in this area in a global comparison, and acknowledging the value of pilotage in the system of today, the WSF is very concerned about the significant socio-economic and ecological effects that marine disasters and shipping in general could have on the Wadden Sea area. Additionally, the WSF is very concerned about the planned installation of offshore wind farms which gives rise to new considerations for the safety of shipping, especially a concept for an overall spatial planning procedure in the offshore zone.

In order to achieve an overview of the state of implementation and enforcement of international, EC and uni-, bi- or trilateral rules and regulations, WSF initiated the study "The Wadden Sea - Maritime Safety and Pollution Prevention of shipping", an analysis of the existing measures and the implementation of agreements regarding maritime safety and prevention of pollution from ships. A further aim of the study was to identify deficiencies and gaps within the already existing comprehensive regime of protection measures in the southern North Sea and the Wadden Sea area. The study was used by the WSF as a starting point for the discussion and formulation of the following recommendations.

4.3.2 Objectives and Recommendations

To improve the maritime safety and marine pollution prevention in the wider Wadden Sea area (i.e. the southern North Sea) the WSF underlines the need for further adequate protective measures. The WSF recommendations reflect the special protective requirements of this area, as internationally acknowledged through the designation of the PSSA Wadden Sea.

The recommendations by the WSF cover the following issues:

- Spatial Planning Offshore Installations and Shipping
- Shipping Safety and Ship Safety
- Emergency Management
- Illegal Discharges
- Port State Control (PSC)

The full list of recommendations (Rec. 1 - 35) by WSF is given in the **Annex 1**.

The recommendations call for national, bi- and trilateral actions, and partly for trilateral initiatives on EC or international level. Therefore, the follow-up on these recommendations or parts of them is considered to be of significance to meeting the required level of safety and pollution prevention. Following these recommendations will lead to improved safety in the area.

4.3.3 Recommendations with Priority

The WSF calls special attention to some of the recommendations. WSF considers measures related closely to the "precautionary principle" as a first step, secondly to the "Principle of avoidance" and in case these fail, the "combating control" as most relevant. Therefore, the implementation of the following recommendations should have priority:

1. Spatial Planning

Rec 1. The planned offshore installations require reconsideration for the safety of shipping. A trilaterally harmonised spatial planning procedure for the Exclusive Economic Zone (EEZ) must be initiated and developed in order not to increase the overall risk for people and nature.

- Such offshore installations require a concept for the safety of shipping by considering additional stationing of Emergency Towing Vessels (ETV), installation of a radar supported Automatic Identification System (AIS) as well as Traffic Separation Schemes (TSS) in certain areas.
- Furthermore, the planning process must include the consideration of traditional shipping routes and shipping activities as well as the enlargement of the safety radius around offshore installations¹ and aerial surveillance.
- Within this joint process the integration of environmental, nature and economic policies and legislation in the Dutch EEZ must be accelerated.

¹ In Germany the minimum safety distance between the outer boundary of a wind farm and existing TSS is defined 500 m safety radius (acc. to UNCLOS Art. 60) plus 2 nautical miles (corresponding to COLREG, rule 10)



Nature and Environment
Herman Verheij
Waddenvereniging

Hallmark. *'The forum is a vehicle to reach mutual agreements on this area, now and in the future. Let's hold each other to account for compliance with these agreements, based on solidarity. This commitment is also an expression of a common identity which we all should carry out.'*

The others. *'There are fairly concrete agreements on sustainable fisheries, agriculture and nature management. And between people who normally wouldn't give each other the time of day. Quite an achievement.'*

'I have faith in the story and in the process.'



2. Shipping Safety

Rec 3. WSF welcomes the efforts for effective Vessel Traffic Management and Information Systems (VTMIS) and proposes to develop the systems further by integrating the different techniques and co-operating with a view to the wider Wadden Sea region from Rotterdam to north of Blavand (see also 1. Spatial Planning).

- In addition WSF emphasizes the importance of co-ordinated implementation of the EC Directive 2002/59/EC (monitoring and information exchange), Safe Sea Net, AIS network and respective IALA² objectives.

3. Port State Control

Rec. 30. To intensify the harmonisation of Port State Control (PSC) procedures (e.g. checklists, interviews, internal quality standards etc.)

4. Mutual assistance in emergencies

Rec. 13. The Joint Danish-German-Dutch response plan (DenGerNeth-Plan) which will replace the bilateral agreements (DenGer-, NethGer-Plan) must be signed as soon as possible to have an instrument for trilateral response action in case of incidents involving oil and other harmful substances in the PSSA Wadden Sea and adjacent areas.

Rec 14. WSF proposes the establishment of a joint coastguard working group to investigate the option for a trilateral common coastguard.

5. Emergency Management

Rec. 15. A trilateral strategic emergency towing concept with consideration for the development of shipping and ship dimensions and offshore installations (see also 1. Spatial Planning) must be established. In this concept the issue of standardisation (regarding, for example dimensions and manoeuvring qualities) must be investigated. The concept must also include the following points:

- When deploying or developing new Emergency Towing Vessels an adequate* bollard pull has to be ensured.
- 24-h-availability of adequate* ETV capacities on stand-by mode at strategic sea positions has to be ensured. A maximum response time (time for the ETV to reach the vessels in distress) of 2 hours has to be ensured.
- * In Germany adequate bollard pull (bp) is defined as follows: "in accordance with the present performance (at least 160 t bp, 17.5 knots trial speed) and the draft must be reducible to 6 m".
- * In NL: in addition to MS WAKER (large ETV) it is advised to consider supplementary ETVs stationed near the Wadden Sea region and the Zeeland estuaries.
- * In DK: Due to increasing traffic along the Danish west coast, the Danish government is requested to reconsider the stationing of an ETV at the west coast, or to sign a contract to charter specified ETV capacity in the case of ship accidents.
- It is also advised to improve coordination with regard to the required ETV capacities in a wider perspective. Norway, DK, GER, NL, Belgium and UK must be called upon to co-ordinate their respective needs and decide on the strategic positioning of ETV in the whole central and southern North Sea.

6. Places of refuge

Rec 22. WSF welcomes the steps taken in the implementation of the EC Directive 2002/59/EC regarding Places of Refuge (PoR) by the three Wadden Sea States.

- The national concepts concerning the handling of PoR and the necessary equipment must be trilaterally coordinated and regularly reconsidered and thus further developed.
- Adequate transparency of the concepts and the level of their practical implementation must be achieved by informing the local authorities and the public concerned.

² IALA = International Association of Lighthouse Authorities



'Sound and realistic.'

Openness. *'We have to be careful with the Wadden Sea, but it shouldn't become a fortress. That isn't necessary either. I can see plenty of opportunities in a one-two between farmers and tourism. Sustainable products, sustainable enjoyment. An additional source of income and free publicity. I make a case for such an all-inclusive approach.'*

The others. *'Everyone deserves a pat on the back. In particular, for their extensive expertise and the high-quality discussion. Not for their commitment. Differences will remain, but can be reduced.'*

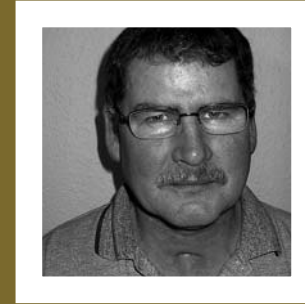
Tourism and Recreation

Knud Hansen

Tidl. borgmester Højer



'A sign of trust in the area and in each other.'



Agriculture

Kristen Fromsejer

De Danske Landboforeninger

Space. *'It is not only a place for nature, but also for people. To live and to work. It turns out that nature conservation goes together well with economic growth and agricultural development. We have been able to go beyond borders and opinions. And now it's the governments' turn.'*

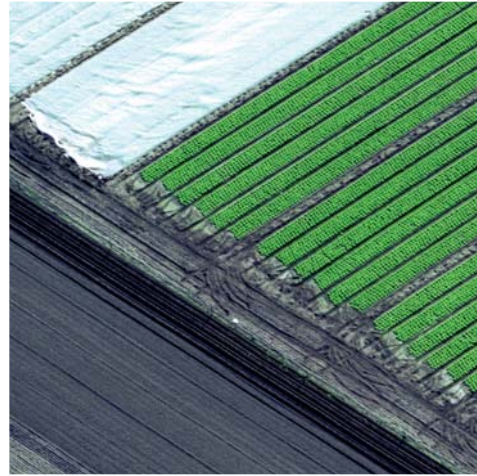
The others. *'I was surprised by the Greens. The debate wasn't always easy, but it was fair and delivered a joint result. That makes me proud.'*



Sector Strategies

- Agriculture
- Fisheries
- Energy
- Industries and Harbours
- Tourism

05.



5.1 Sustainable Agriculture

5.1.1 The Vision

- Agriculture in the Wadden Sea region should be given the possibilities to develop in a profitable way taking due account of
- the full variety of the typical cultural Wadden Sea landscapes (dykes, rivers, mounds, etc.)
- the characteristic flora and fauna of the Wadden Sea region (geese, lapwing, etc.)
- and contributing to viable and dynamic rural communities

5.1.2 The Strategy

In order to work towards the Vision, the following Strategy will be pursued, related to the sustained differentiation and diversity of the structural developments of the sector and the possibilities for broadening the income basis by improved Service and Product Diversification:

STRUCTURE OF AGRICULTURE

1. Scale enlargement

Scale enlargement is an important condition for the survival of most agricultural holdings. It generally leads to higher efficiency and may also reduce environmental impact. Scale enlargement should be done in balance with the typical Wadden Sea landscape, be socially acceptable, avoid conflicts with tourism and respect biodiversity and environmental quality.

2. Spatial adaptation: farming in suitable areas

In order to increase the efficiency of agriculture and thus to improve profits and decrease the environmental impact, agriculture should, as far as possible, be located in areas best suited for this purpose, taking account of aspects such as soil quality and water management.

3. Dynamic rural communities

Agricultural development is vital element for dynamic rural communities on the islands and the mainland and vice-versa.

4. Local Cooperation

Local cooperation between farmers in production, service and added value will increase efficiency, spread risks and increase the number of possibilities for broadening the income spectrum.

SERVICE DIVERSIFICATION

5. Nature and landscape management

Nature and landscape management by farmers or cooperations of farmers is considered a potentially good option for generating additional income, provided there is sufficient local cooperation between farmers and there are good contracts with competent authorities (sufficient compensation, long-term perspectives)

6. Tourism, recreation and direct selling

Tourism, recreation and direct selling may generate additional income for farmers, provided these activities are professionalised and coordinated at the regional level.

The actual contribution to the income of farmers will strongly depend upon the location of the farm, but active creation of farm-related attractions and events is less site-dependent.

PRODUCT DIVERSIFICATION

7. Medicine-low, pesticide-low, animal friendly products

High-quality products from "regular" agriculture, i.e. products grown with little or no medicines and pesticides and which are animal friendly, will be financially supported by regulations of the Common Agricultural Policy.

8. Organic products

It is expected that there will be a market segment for organic products in future. The size of this segment will strongly depend upon consumers' attitudes, welfare development, government support and promotion.

9. Added value

Adding value to bulk products, i.e. the own production of cheese, eggs, bread etc., may generate additional income, especially in combination with tourism and recreation and in local cooperation settings (higher product diversity, shared selling point). Promotion and labelling of regional products are also very relevant.

10. Energy

The generation of energy (mainly own supply through biogas, wind and solar energy) will contribute to the income of farmers.

11. Wadden Sea label

A Wadden Sea label for Wadden Sea products might be an appropriate element for the sector strategy, but is still surrounded by many uncertainties. For this reason the feasibility and added value of a Wadden Sea label should be investigated in a project (see below).

5.1.3 Obstacles

The implementation of a sustainable agriculture strategy could be hampered by

- Insufficient room for bottom-up processes.
- Protection rules and regulations that apply to the Wadden Sea Region.
- No level playing field: large differences between nations in rules and regulations for same issues.
- Insufficient reliability and feasibility of nature management contracts and regulations (financing, time perspective).



Industry and Harbour

Hans Haerkens

VNO-NCW Noord

No fear. *'There was mutual understanding. A level playing field. The report has not turned out to be a licence for reckless economic development. Nor for sealing off the Wadden area. Companies, fishermen, and agriculturists already treat this precious area with care. There are certain points in the report, however, that need to be clarified. I am committed to achieve this.'*

The others. *'The different stakeholders inside and outside the public domain are more aware of mutual considerations including environmental organisations. They have gained a lot.'*

'A positive result after a slow start.'



- Insufficient insight/awareness of costs and benefits for society of policies and programmes that may have an impact on agriculture-nature management programmes and nature protection programmes.
- No agreed common definition of Wadden Sea region specific flora and fauna.
- Water management problems for farming in the hinterland due to relative sinking of land levels (because of exploitation of gas reserves, sea level rise and the fact that new sediment is only being deposited on the sea side of the dikes).
- In some cases, siltation and lack of proper maintenance of gullies and river outlets in the Wadden Sea, creating problems for farming in the hinterland.

5.1.4 Recommendations

In order to remove the above obstacles and to clear the way for a sustainable agriculture strategy the following recommendations are put forward:

Structure of Agriculture

- Evaluate the developments with regard to scale enlargement (including the impacts) of the last 20 years and include the results of the evaluation in spatial planning policies. By anticipating future developments with regard to scale enlargement, sustainability aims in the Wadden Sea region can be achieved. This relates to increasing the efficiency of agriculture (see also Strategy element 2), increasing employment and improving biodiversity at the regional level.
- Stimulate and facilitate local cooperation of farmers by encouraging entrepreneurship, raising awareness of the advantages of local cooperation, and support by regional authorities of infrastructure and education. Use in this respect the CAP modulation instrument for improvement of agriculture.
- A depopulation of the Wadden Sea Region will first and foremost have a negative influence on the viability of the communities on the islands and the rural areas on the mainland. In order to provide perspectives for healthy development, plans should be undertaken and initiatives be supported in which agriculture and other commercial activities are given certain privileges and prospects, taking into account and respecting the natural and cultural assets of the areas.

- Agriculture on the Wadden Sea islands is restricted by limited space and restrictions resulting from landscape and nature regulations. Moreover, there are problems with the marketing of local products because of the small size of the islands. For the survival of island farming it is necessary to provide administrative support and compensation measures improving the conditions for island farmers (diversification on islands).
- Improve drainage conditions for agriculture in the hinterland with respect to sedimentation problems in the Wadden Sea and impacts of climate change (increasing ground water levels and temporary floodings of fresh water.), taking due account of natural values. Searching for sustainable options in an ICZM framework regarding areas where agriculture becomes difficult because of a growing difference between rising sea level and sinking land level.

Service Diversification

- Provide sustained and increased financial support for nature and landscape management.
- Evaluate nature protection programmes and use the outcome of these evaluations for improving the programmes.
- Improve possibilities and support initiatives for additional activities by and income for farmers (“agro-tourism”).
- Use results and proposals of local and regional projects (Leader +, model regions Uthlande, Bremen, Ostfriesland) in national and trilateral policies.

5.1.5 Projects

The following projects are considered relevant for specifying the strategy:

- Inventory and assessment of protection rules and regulations, including national differences, in order to improve the conditions for both farmers and nature.
- Inventory and assessment of product labels in the Wadden Sea region (which have been successful, which not and for what reasons).
- Elaboration of the Strategy for a pilot region.
- Inventory and definition of Wadden Sea rural area specific flora and fauna, including an inventory and assessment of existing nature management plans.
- Analysis of costs and benefits of policies and programmes that may have an impact on agriculture-nature management programmes and nature protection programmes.
- Investigation of possibilities for drainage and other land uses of low level land with respect to increasing sea level rise and future coastal protection options.



‘The agreements aren’t solid until the governments adopt them.’

Consensus. *‘The common feeling is: this is not an open-air museum. People need to make a living here. That means that nature and the environment have to be put on hold. But also that we need to eliminate external threats. Such a general statement doesn’t win us any points, but it provides a basis for decisive actions.’*

The others. *‘Shipping stands out. It is economically important, but also dangerous. Take that oil tanker off the Spanish coast. One accident and the entire area is done for. So, proper warning and check systems are in order.’*

Tourism and Recreation

Martin Loos
NNWB





5.2 Sustainable Fisheries

5.2.1 The Vision

- A healthy, dynamic ecosystem
- Long-term profitable fishing
- Keep occupation and added value in the region

5.2.2 The Strategy

In order to work towards the Vision, the following Strategy will be pursued:

1. Integrated Resource Management

Fisheries in the Wadden Sea and adjacent coastal zone will be based upon Integrated Resource Management. The aims of Integrated Resource Management are to reduce impacts on the ecosystem and to guarantee the reproduction of the stocks. Integrated Resource Management will as far as possible make use of long-term licences and flexible rules and regulations, tuned to the dynamics of the Wadden Sea ecosystem, out of respect for and in harmony with nature.

The knowledge basis for Integrated Resource Management must be derived from integrated trilateral research programs, trilateral exchange of relevant information, trilaterally comparable methods for stock estimation and trilaterally harmonised monitoring.

2. Long-term perspective

A long-term perspective for Wadden Sea fisheries is a prerequisite for the survival of the sector. Innovation is only possible with a long-term perspective. Conditions for a long-term perspective are long-term licences and improvement of the image of the sector. Long-term licences will be a central element of integrated resource management plans.

Improvement of the image will include enhancing local support, including maintaining and increasing added value in the region and safeguarding cultural-historical fishery elements.

3. Labelling

The position of Wadden Sea fisheries products will be strengthened by establishing a Wadden Sea label. The identity of the region will benefit from such an approach.

4. Diversification

The sector will strive for diversification and scale optimisation, both within the framework of integrated resource management. Diversification and scale optimisation imply the fishing of a variety of species by vessels best suited for this purpose (in terms of good profits and low ecosystem impacts). Mixed licences, embedded in integrated resource management plans are needed for diversification.

Also regional processing and regional selling will contribute to diversification of the chain of catching, processing and marketing.

5. Organisation

The favouring of national and trilateral organisation of fish producers in producers' organisations is a prerequisite for integrated resource management. In this respect the instrument of 'extension de regime' is urgently needed.

6. Facilities

Good facilities in all current fisheries harbours, i.e. infrastructure, education and training (within the whole chain), hygienic control facilities, port reception facilities and related services (shipyards, suppliers etc.) are a basic condition for the long-term perspective of the sector.

7. Innovation

Innovation is necessary to reduce ecological impacts and improve profits and is thus a basic element of sustainable fishing. Innovation is only possible with proper financial and administrative support. Innovation should preferably be carried out within a trilateral research framework.

8. Best Environmental Practice

The sector will apply Best Environmental Practice (BEP) on vessels and in harbours. This concerns BEP in fishing methods, sailing and processing.

5.2.3 Obstacles

Fisheries in the Wadden Sea and adjacent waters are to a very high degree determined by conditions set by local, regional national and international authorities.

The implementation of a sustainable fisheries strategy is currently hampered by

- Unnecessary, static and too complicated rules and regulations causing unnecessary losses of material and a high administrative burden
- No possibilities for market regulation by producer organisations also aimed at conservation goals
- Insufficient or lacking long-term perspectives, mainly as a result of short term licenses
- Insufficient support by local and regional authorities of local and regional economic developments
- Increasing user conflicts resulting in loss of fishing grounds.



Energy

Wim Groenendijk

Nogepa

Foundation. *'The vision for sustainable development receives broad support. Actions are now needed to ensure the sustainability of that vision. The possibility of gas extraction in the Wadden Sea was a controversial public issue. It still is. The difference is that now we talk about the method of extraction, because it is beyond dispute that we need to draw on our reserves.'*

The others. *'Sustainable development is made or broken by a sound economic background. The key to success is integration. Combine the use of sustainable energy with tourist attractions. In this way sectors can reinforce each other.'*

'A good basis to build upon.'



5.2.4 Recommendations

In order to remove the above obstacles and to clear the way for a sustainable fisheries strategy the following recommendations are put forward:

- A political commitment to long-term perspectives for sustainable fisheries in the Wadden Sea and adequate compensation for lost fishing areas.
- The facilitation of a trilateral platform consisting of the fisheries sectors, responsible authorities and nature protection organisations with the aim of discussing relevant aspects of Wadden Sea fisheries. For shrimp fisheries this includes fishing efforts in relation to market demands, ecological effects of by-catch and effective market regulation. For shellfish fishing this includes the estimation of stocks, the estimation of food demand for birds and the exchange of experiences with resource management plans.
- Long-term resource-based management plans, based upon flexible long-term licenses, which take into account both the Wadden Sea conservation goals and the dynamics of the system and, for small scale fisheries, mixed species licences.
- Sufficient possibilities for small scale companies with mixed-species licences as a contribution to the diversification of fisheries.
- Harmonisation and optimisation of rules and regulations (including those related to the implementation of the Habitat Directive, quality control and hygienic requirements).
- Possibilities for carrying out innovative pilot-projects for improvement of fishing efficiency and reduction of ecosystem impact.
- The favouring of trilateral POs responsible for resource management and the establishment of the instrument of 'extension de regime' in all Wadden Sea states.
- Facilitation and stimulation of an integral marketing strategy for Wadden Sea products, including local marketing.
- Active support of traditional fisheries by local and regional authorities, mainly related to facilities for hygienic control and local selling.
- The installation of a trilateral fund for research projects and the exchange of research information, to be jointly financed by the sector and the responsible authorities.

5.2.5 Projects

The following projects are considered relevant for specifying the strategy:

- An inventory of all relevant rules and regulations (incl. safety standards) and an analysis of national and regional differences in implementation and application.
- An inventory and comparison of fisheries-relevant facilities in all Wadden Sea fishery harbours
- An investigation into by-catch of shrimp fishing and the impacts thereof, also in relation to fishing intensity. The study should also include the search for possibilities for reducing by-catch.
- An investigation of possibilities for promotion of Wadden Sea products, including a comparison of current labelling systems.



'The cross-border aspect is special, the contents aren't.'

Together. *'Some of the people I represent are critical. Such mistrust is understandable. At first, I myself feared too that the entire area would be thrown open. But by now the Wadden Sea feeling has started to grow. The trilateral approach has brought us closer together. I would like to continue this, including smaller nature and environment organisations.'*

The others. *'There was a heated debate about fisheries. There is still some disagreement, but catch limitations have become more acceptable.'*

Nature and Environment

Holger Wesemüller

Umweltstiftung WWF-Deutschland



Regional Government Authority

Patrick Poelmann

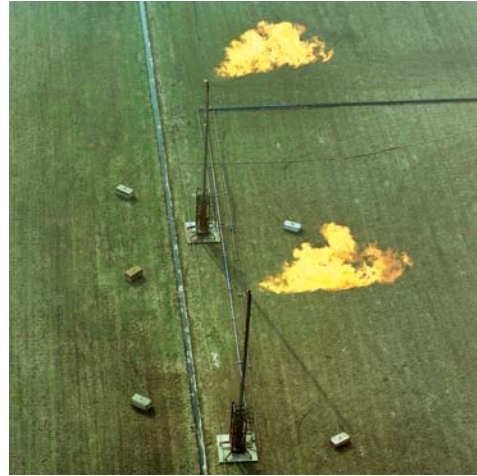
Nederlandse Waddenzee Provincies

Bond. *'Give and take. Recognise each other's problems. And think about how you can live together. The report provides a good framework for us to work with. Whichever way you look at it, we will meet each other again. Businesspeople and conservationists. Holding an agenda for the future.'*

The others. *'Mechanical cockle fishing has been scrapped, but not by the forum. It was not easy to make any severe choices there. But we've gained results that the governments can now profit from.'*

'The remaining points still need to be earned.'





5.3 Sustainable Energy

5.3.1 The Vision

- Saving energy of more than 20 % of the total consumption within 20 years
- Increase of energy efficiency (transformation, processing)
- Preferred use of renewables and gas as primary energy sources
- Securing of energy supply for the society
- Power generation and exploitation of energy resources in the Wadden Sea Region to be in harmony with the resilience of the sensitive ecosystem
- The Wadden Sea Region as demonstration area for sustainable energy use

5.3.2 The Strategy

In order to work towards the Vision, the strategy of the energy sector contains the following elements in which an emphasis is laid upon those strategies, which are most specific for the Wadden Sea Region – wind energy production and extraction of hydrocarbons. Other renewables and LNG are also important energy sources and relevant to other sectors (agriculture, industry and harbours). These sources are also partly relevant for the WSR but do not yet play a major role. CHP and energy saving are more general energy issues but are very important with regard to an overall view of the energy market, particularly in regard to energy consumption:

1. Wind energy production in the Wadden Sea Region

Wind energy has a substantial share of electricity production in the WSR. It is still a growing market with a well-known technology. In addition to the use of wind energy on-shore, currently off-shore wind farms are being planned which, if they are established, will require installations of various facilities both, on and off-shore. Additionally, integrated planning is a precondition to undertaking all necessary activities with respect to best environmental practice and to minimize environmental impacts. Also, coordination and cooperation with other sectors (e.g. fisheries, shipping) are necessary to avoid conflicts. As the development of renewable energy production is also a national aim, subsidies for wind energy must be regularly distributed to all consumers.

2. Extraction of hydrocarbons in WSR

In the WSR, there are some hydrocarbon resources, which are considered exploitable within the next 20 – 30 years. In the Netherlands, the Wadden Sea gas deposit is about 35 billion m³, which corresponds with the Dutch consumption of one year. The drilling for German Wadden Sea oil (Mittelplate) has a share of about 2% of the total oil supply in Germany, a small part but a contribution to the strategy of getting more independent from imports.

In the case of oil and gas exploitation in the sensitive Wadden Sea, the highest technological standards and best environmental practice are required. The knowledge and techniques are a valuable resource, which can be exported and used in other areas.

3. Solar energy and biomass as renewable energy production

The main recent elements of solar energy are collectors for heating water. Solar cells for electricity generation is an available technology but still rather expensive. Big technology breakthroughs are expected. The technology of using biomass for

energy supply is available and should be further improved. New plants could contribute to minimizing the amount of organic waste and to reducing emissions in the agricultural sector.

4. Construction of LNG terminals

Liquefied natural gas (LNG) was seen for many years as little more than a way of moving gas to markets where pipelines are not feasible. Now it is seen by the stakeholders as having the potential to meet the increasing gas needs of a global world. In terms of market outlook, Europe is expected to be a significant growth market. Expected gas supply gaps in the USA and Europe, and reducing LNG costs, could make LNG at present an attractive prospect for the growing energy demand.

5. Extended development of combined heat and power systems (CHP)

CHP, also known as cogeneration, is an efficient, clean, and reliable approach to generating power and thermal energy from a single fuel source. By recycling waste heat, CHP systems achieve typical effective electric efficiencies of 50% to 70% — a dramatic improvement over the average 33% efficiency of conventional fossil-fuelled power plants. HP can substantially contribute to saving energy in general. Therefore, a better awareness of these systems is required.

(Other energy sources such as nuclear and hydro power are also considered as possible energy sources, but these are not particular relevant for the WSR and do not have the same importance as CHP and energy saving for valuable energy strategies).

6. Implementation of policies for energy saving and increase of efficiency

Energy saving in general, but also for the WSR, is a very important measure for a sustainable use of the available resources, for a reduction of greenhouse emissions and avoiding polluting our environment.

- Energy saving includes:
- Energy savings for consumers with an emphasis on a reduction of more than 20% in the total private consumption.
- Energy savings in building blocks and service centres.
- Energy audits, benchmarks, labels (for industry) contribute to savings.
- Taxation & subsidies and simplified regulations are also part of saving policies.



Regional Government Authority

Olaf Bastian

Kreis Nordfriesland

Trust. *'At first, the ice was pretty thin, but slowly the trust grew. We managed to formulate common objectives and recommendations. However, we should not get stuck in plans and studies. The forum did not only provide a platform, but also a network. Let's continue to use that in future.'*

The others. *'Obviously, where safety at sea is concerned, we cannot hide behind borders. If something goes wrong at sea, we all suffer. Prevention is cheaper than clearing up.'*

'Everything needs to be sharpened.'



5.3.3 Obstacles

- the little knowledge of benefits as well as impacts of off-shore wind farms on other sector activities and on the environment, delaying the planning process and implementation
- no common concept for off-shore generated energy to storage or to transport the energy to the customers
- hydrocarbons are an important part of the energy supply. It is more complex and costly to extract hydrocarbons in the Wadden Sea region than elsewhere, because of the regulations for the Wadden Sea and public concern about oil pollution

5.3.4 Recommendations

Wind energy

- to install offshore wind farms only outside the 12sm zone.
- before installing off-shore wind farms on a large scale, a thorough evaluation (cost-benefit, impacts, technological improvements, energy transport to on-shore facilities, etc.) by means of a few pilot wind parks at distant off-shore sites has to be undertaken. Also in the planning process, all stakeholders should be involved.
- to give due attention to safety standards with regard to wind park operation, shipping and other sectoral activities

Hydrocarbons

- in the case of the drilling of oil and gas wells in the Wadden Sea Area, production operations should be carried out from outside the Wadden Sea [whenever technically and economically feasible and without significant impacts on the environment.]³
- to acknowledge that the use of existing facilities and infrastructure in the near future is essential from an economic perspective.
- Use the experience gained by the exploration and production industry and supply companies applying best environmental practice in the Wadden Sea Region for the export of technology.

³ Supported by the majority of the Forum. The Nature and Environment organizations are as a matter of principle opposed to oil and gas extraction within high quality protected areas such as the Wadden Sea. They are of the opinion that under no circumstances such operations can be allowed to have significant impacts on the environment, such as pollution, subsistence of the soil and related erosion, and industrial installations in the middle of otherwise unspoiled and beautiful landscapes.

Solar and biomass energy

- to strongly promote and support solar energy, particularly in tourist areas of the WSR. This can demonstrate the use of alternative energy sources and contribute to a sustainable development of remote areas in the WSR.
- to evaluate the potential of generating energy from biomass in the WSR, which could benefit the agricultural sector at the same time
- to develop regulations for solar energy development so as to prevent proliferation in the sense of uncontrolled developments.

5.3.5 Projects

To support the strategies, the TG Energy proposes the following projects for short-term implementation:

1. Off-shore wind farms

A study, which collects and compiles all existing relevant data with regard to off-shore wind farms. This includes perspectives of renewable energy market, cost-benefit analysis, spatial planning in the EEZ, required technical facilities, connection to on-shore grid, risk analysis, conflicts with other sectors and the environment

2. Solar energy

A study about possibilities to use solar energy and possibly other sustainable energy in tourist areas, including an inventory of initiatives already undertaken.

3. Biomass generated energy

Feasibility study of biomass generated energy in the WSR including income possibilities for local farmers

4. Computer model

Development of computer animations to visualize the spatial planning of energy related installations, with the option to expand to other sectors and covering the entire WSR.



'Quite a few hurdles have been taken.'

Recognition. *'Shipping is and remains important for the Wadden Sea area. The recommendations on this point are clear: even a small harbour like Esbjerg counts for freight transport around the world. It is a relatively fast and safe way of transport with sufficient capacity. I'm glad this role has been recognised.'*

The others: *'Coastal protection deserves everyone's attention. A good trilateral monitoring system can support this. Not only nature conservationists will think so, but it is also our priority.'*

Industry and harbour
Henning Nørgaard
Esbjerg Havn



Dutch Wadden Sea Communities
Joke Geldorp-Pantekoek
Gemeente Texel

Links. *'Building bridges. That's mainly what we've been doing. Between the interest groups that are involved. And between forum members and inhabitants. For example, the islanders want to see their feelings translated into political decisions. The report proves that this is possible. Convincing, based on arguments.'*

The others. *'Agriculture, fishery, tourism. Everyone has achieved a success in one way or the other. And they have secured a place for themselves. The Wadden Sea is a living monument. Dynamic, just as its inhabitants.'*

'Now it's up to the higher authorities to get the results.'





5.4 Sustainable Industries/Harbours

5.4.1 The Vision

- The vision of the industry and harbour sector includes the following elements:
- Full employment in the WSR
- Clusters of industry plants and business services
- Specialization in production and marketing of quality products and services
- Wadden Sea harbours competitive with harbours outside the area
- Optimal harbour capacity and cooperation in the Wadden Sea countries

5.4.2 The Strategy

In order to work towards the Vision of the industry/harbour sector of the WSR, the following Strategy elements will be pursued:

1. Initiating the clustering of interdependent large scale industries and attraction of related business services

Industry clusters are concentrations of interconnected companies, specialist suppliers, firms in related industries plus business services and associated R&D institutions, that compete but also co-operate. Closely related to this is the development and use of logistics systems with regard to the operation of industries, business services and their infrastructure. In this context harbours are not only important logistics centres and interfaces for world trade, but they also developed at outstanding industrial sites. They should be used as crystallization points for new industrial plants. Clusters have synergistic advantages through shared facilities and services. Impacts could be minimized by less use of space, concentration of noise and light pollution and a better control of emissions and pollutants. Examples include the concentration of the chemical industry at harbour locations (e.g. Eemsmond, Wilhelmshaven, Nordenham, Stade, Brunsbüttel) with close connections to power plants and refineries. The focus is on the development of existing industrial areas.

In many cases, large scale industries, which have a high economic importance, require a high energy supply, which should be taken into account in the sustainable development concept for the Wadden Sea region.

2. Strengthening and further development of the specialized food sector of the WSR (e.g. fish industry, quality agri-products)

The food industry is the second most important industrial sector in the WSR but a significant reduction in jobs is expected in the industry in the future. The main products are dairy products, meat, fish, frozen food, tea and coffee.

The food industry, with the sub-sector of food processing, is closely associated with agriculture and fishery and its market is more or less focused on the region. One exception is the mussel market. Prospects include segments such as frozen and convenience foods, regional quality products and new products, including the field of biotechnology.

3. Further development of quality metal industry (production and processing) and engineering and related services (wind turbines, cars, ships, aircraft, off-shore industry, etc.)

This is largest sector in the WSR and includes engineering, metal

processing and the production of metal products. The main sub-sectors are aircraft, vehicle, ship building and wind energy. In comparison to the chemical industry, the companies are sometimes small or medium-sized. While the employment within the sector is decreasing, the development in terms of GDP is positive; and engineering has a fairly good growth potential.

4. Acquisition of new harbour related activities, such as green ship wrecking, specialized shipyards, recycling scrap metal.

Environmental concerns could lead to an increasing market for green ship wrecking, for vessels such as single-hull tankers, old cargo vessels and naval vessels. Other advantages will be provided by recycling expensive raw materials. EU will issue stringent conditions for ship owners and flags of convenience (when calling at European ports), which will lead to an increase in the wrecking of ships.

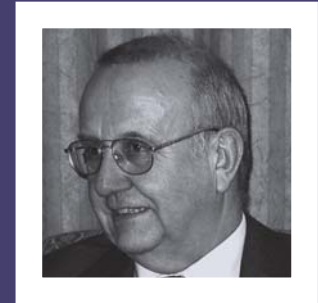
With regard to the global competition, WSR ship yards will have a future only through specializing in vessels such as cruise liners, tug boats, research vessels, specialized chemical tankers etc. Technology and innovative know-how is required.

5. Harbour concept for big container vessels and feeder traffic in the WSR

Harbours have a high economic importance, particularly for chemicals, energy, food, pulp and paper, steel and the car industry. Cargo transport is strongly increasing, with an emphasis on container shipment. Traditionally, the harbours specialize in different cargo segments, but the importance of harbours for the region and for economic development has led to an increase of pressure on harbour development and competition between regions. New container port facilities for the worldwide container transport are being planned or under construction in Bremerhaven, Hamburg and Wilhelmshaven (Jade-Weser Port). A concept can improve the possibilities to compete with Rotterdam/Antwerp, strengthen the portfolio of the different harbours and could give initiatives for new segments. The harbours would also benefit from cooperation over transport systems, a common occurrence on the world market. An additional advantage is that there will probably be less dredging than if there were no harbour concept

6. Long-term perspectives to guarantee accessibility of the Wadden Sea harbours, meeting environmental standards

Considering the function of the bigger harbours as ports for overseas traffic, a long-term perspective in terms of accessibility is necessary to keep the harbours alive. This is also an important issue



Agriculture

Hans Peter Stamp

Former member of Bauernverband Schleswig-Holstein

Scale-up. *'Family businesses without successors and small incomes have no choice but to merge. The Wadden Sea area should provide room for this development. It would be an economic waste to let this industry die out. Fortunately, the forum is very clear about this.'*

The others: *'The forum's agricultural viewpoint clears the way for good collaboration with nature organisations. They can take the credit for that, as well. We feel less anxious about our livelihoods being threatened.'*

'We have an optimistic view of the future.'



for the smaller harbours for a true short-sea traffic in the WSR. In a hub and spoke system, the big overseas container lines call at only a few main ports. From these harbours the cargo is distributed to the smaller ports by short-sea shipping.

7. Establishment of “centres of excellence”

Alongside traditional education (schools, universities, traineeship, etc.), special education and knowledge-building for industrial purposes is required. New educational concepts, implemented by, for example, centres of excellence, can meet the specific needs of industrial businesses (e.g. specialization in ship building, food processing and engineering) in order to gain advantages over other competitors.

New educational facilities and knowledge can be provided through a close cooperation between universities, applied science institutes and companies, as well as a better technology transfer to companies. Centres of excellence can be either associated with universities and research institutes or newly established.

8. Level Playing Field for harbours

Comparable harbours (small, medium, big) in the Wadden Sea Region should in principle be subject to comparable policies with regard to accessibility, extension etc. (level playing field).

5.4.3 Obstacles

- a lack of spatial planning with regard to business services and commercial use of former farm houses
- the lacking financial support for the establishment of “centres of excellence”

5.4.4 Recommendations

For a sustainable development of industries and harbours in the WSR, the TG Industry and Harbour recommends:

Strategy elements 1,3,4

- to administratively support clustering by adjusted spatial plans regarding land use, use of buildings and infrastructure.

Strategy elements 2,3,4,6

- to establish WSR specific associations to promote economic sub-sectors, regionally and locally to strengthen the region.
- to invest in infrastructure measures in the WSR for a better competitiveness of the regional economy

- to issue guidelines and regulations (simplified or adapted) in order to create lucrative business opportunities (off-industry, green ship wrecking, recycling business).

Strategy elements 5,6

- to develop concepts for harbours to work together and to maintain and optimise the existing harbour infrastructure, taking into account both future developments in ship-construction and the need to protect the unique nature of the Wadden Sea region.

Strategy element 7

- to provide a better cooperation between research and economy as well as technology transfer to industries and business services.
- to establish more schools of business administration in cooperation with the chambers of commerce. This can be further developed to centres of excellence for which financial support has to be provided.

5.4.5 Projects

The following projects or measures are considered relevant for specifying the strategy:

- a detailed study of the importance of a Wadden Sea label and the feasibility of its implementation.
- a project “what is green ship wrecking” - implementation feasibility, prospects, environmental impacts.
- a detailed study of independent universities to investigate the possibilities to reduce light and noise pollution as well as to minimize emissions (e.g. regarding clustering).



‘We need to share the space, which requires compromise.’

Unity. *‘The biggest gain is that the parties concerned were very accommodating. Interest groups from three countries with very diverse agendas reached agreement. We managed to present ourselves as a unity. Now, all we are waiting for is a political agreement.’*

The others. *‘I listened in admiration to the Energy group who prefer not to drill in the Wadden area. The fishermen’s self-regulating arrangement is also a remarkable turn of events.’*

Agriculture

Hans-Peter Witt

Bauernverband Schleswig-Holstein



Fishery

Manuela Gubernator

Niedersächsische Muschelfischer

More. *‘When you drive a car, grow produce or fish, you affect your environment. Sometimes you don’t have a choice. You can point this out to each other and create understanding. But while we’re talking, the development continues. Recommendations are superseded before the ink is dry. Businesses and authorities just carry on building and changing regulations.’*

The others. *‘Take a boy who is being bullied at school. His mum speaks with the teacher, with friends, with parents. But she doesn’t speak with the bully himself.’*

‘Despite criticism and doubts, the contacts are useful.’





5.5 Sustainable Tourism

5.5.1 The Vision

- The Wadden Sea Region, including the islands and the Halligen, retains unique (from a world wide perspective) and intact natural conditions, which in conjunction with an equally established landscape, seascape and cultural heritage provides an outstanding tourist destination with a unique market position.
- The tourism industry is sound and prospering, and offers a high quality product in terms of a broad scale of offers for differentiated target groups, based upon the principle of 'authenticity', from which local communities and their populations profit.
- Tourism raises the awareness of the Wadden Sea Region's unique nature and cultural landscape heritage and enhances its values.

5.5.2 The Strategy

1. Tourism in an intact "Wadden Environment"

- Ensure that the perception and experiences of the combination of outstanding natural qualities (clean, quiet, birds and seals), landscape images (open), the cultural and historic assets (traditions and heritage) and the art and handcrafts of the Wadden Sea Region will be maintained and, where necessary, further protected in order to ensure the long term integrity of those values.
- A broad palette of tourist offers and unusual experiences must be offered and integrated into planning and management schemes in accordance with the above framework.
- Enhance the protection against external impacts stemming from pollution and increase the safety of shipping to the benefit of the Wadden Sea Region.

2. Water sports

- Improve the development of water sports and related activities (yachting, canoeing and "tidal flat walking") with respect for the "Wadden Environment" (sensitivity, quiet, openness) and support regional development.
- Offer appropriate landside infrastructures in order to meet the demands.

3. High-quality tourism

Raise the quality of tourism facilities and offers in order to meet the increasing expectations and demands of tourists:

- by using the different nature and cultural characteristics of the region (the islands, the Halligen, the coastal region)
- by using the variety of the supply
- by providing up-to-date accommodation facilities, restaurants,
- cultural and social events and activities including authentic experiences.

4. New/changed demands

- Ensure the ability of the tourism industry to adapt swiftly to new market demands and demographic and social changes in the context of sustainability (protection of nature, strengthening the local economy and enhancing the economic foundation (jobs, quality of the product)).
- Develop new tourist products for different target groups in combination with the necessity to increase services.

5. Infrastructure

Improve public and private transportation means into and within the Wadden Sea Region, including reservation and luggage systems in order to meet the trend for more frequent short-term holidays.

6. Marketing

Develop a marketing strategy for Wadden Sea region(s) based upon common principles and perspectives of the "Wadden Environment", taking due account of regional and local differences in which a common "brand" should be included - through improved region-wide collaboration between the tourism industry, the local and regional authorities and the nature conservation organizations.

5.5.3 Obstacles

The development strategy for sustainable tourism is currently hindered by the following factors:

- The present infrastructure (public and private) hinders the optimal exploitation of the potential, especially with regard to short-term holidays.
- Many regulations complicate a quick reaction to changes of the demands of tourists.
- The very heterogeneous structure of tourism facilities in most of the Wadden Sea Region, involving lack of mutual knowledge and organizational framework, which can oversee and support implementation of such strategies.
- The external impacts from pollution and shipping safety continue to constitute a potential impact on the region with grave consequences for the tourism industry.
- Inappropriate industrialization of the Wadden Sea Region on land and offshore (wind turbines, harbour extension) potentially impacts on the tourist quality of the region (open landscape, silence, impact on historic developed structures)
- The Wadden Sea Region has a potentially unique market position but fails to exploit this uniqueness because of such things as lack of awareness, lack of cooperation between the key stakeholders and lack of openness to new ideas and trends
- Attention from authorities regarding financial resources addressed to the cultural life in the Region does not allow large-scale activities



The Wadden Sea Municipalities

Kjeld Nielsen

Fanø Commune

Done it ourselves. *'The parties involved created the report themselves. Bottom-up. The recommendations are based on feelings that everyone shares and understands. We are looking through the same glasses now. Take for instance safety involving ships and harbours. That requires an 'umbrella' approach. I will urge the authorities to establish a common coast guard.'*

The others. *'Harbours and industry indicated that they want to expand. But with respect for nature and people's living environment. A good starting point.'*

'A solid basis for new initiatives.'



5.5.4 Recommendations

- Maintain and where necessary increase the efforts to reduce impacts on the Wadden Sea Region stemming from pollution from all sources including the operational discharge of ships
- Replace regulations with information whenever possible and improve flexible zoning in time and space, where this has not yet been done
- Analyse whether (and which) regulations make it difficult for the tourism sector to adapt swiftly to changes in the market and what is needed to enable these processes.
- Develop landscape quality plans on the basis of landscape types.
- Institute comparable national classification systems for the entire Wadden Sea Region.
- Focus on the preservation of the unique nature and cultural heritage in the marketing of the Region.
- Establish a Wadden Sea Tourism (marketing) group with the task to develop, elaborate and implement common projects to further the realization of the vision and strategies - which advance the concept of sustainability, links the interests of tourist development and nature and landscape protection as well as the needs of the local population.
- Yachting harbours should be maintained with a sufficient capacity, accessibility, and landside infrastructures, in terms of the environment too (sufficient number of berths, sufficient capacity of harbour reception facilities), carefully tuned to local circumstances.
- Develop "holiday packages" with special attention to the combination of nature experiences and culture (historical assets, including bicycle tours making use of the North Sea/Wadden Sea bike route.
- Improve sufficient up-to-date offers for those tourists who want an active holiday - outside areas in which other tourists first and foremost want to relax; respecting the nature protection regulations – and visa versa.
- Develop infrastructures of the area to meet the demands of individual target groups (e.g. offers for disabled).
- Improve the traffic infrastructure within the Region in order to be able to improve the marketing of short-term holidays and support environmental friendly solutions and initiatives.

5.5.5 Projects

- Through the organization of a Wadden Sea-wide event based on common cultural and landscape heritage features such as whaling, water and coastal management, salt excavation etc. to enhance the common understanding in the tourist sector of the cultural and historical values within a marketing strategy of attracting tourists. This could also include the organization of a recurrent (bi) annual Wadden Sea Festival throughout the Wadden Sea Region with the aim of promoting a positive impression of the Wadden Sea Region as an attractive region for visitors and support local tourist entrepreneurs.
- A concept for cruise trips in the Wadden Sea is to be developed with the aim of building up off-shore tourism and present the Wadden Sea as one entity – already existing offers (e.g. in Region Uthlande) should be included.
- Sustainable activities and projects should be developed on the basis of concrete themes (e.g. common sustainable standards and common classification systems for accommodation facilities) and target groups (e.g. the Interreg III B project suggestion EUREGIO The Wadden: development of offers for disabled persons).
- The establishment of a network of bird watching localities throughout the Wadden Sea Region also as a specific offer for tourists. At a number localities in the Wadden Sea Region bird watch localities have been established and special events organized around migratory birds, in particular geese such as the "Ringelganstage", "Sort sol" etc. These events and localities have proved very successful in providing a quality event for those especially interested and tourists and are important for local communities. The Wadden Sea Region is Europe's bird watching locality no. 1. • These sorts of activities should be extended to the entire region with the aim of providing a quality offer for tourists and other interested and provides a positive image of the region.

1 2 3 4 5 6 7 8 9 10

'Many question marks still need to be turned into exclamation marks.'

Desires. *'The appeal to the governments to align the regulations and their interpretation is top of the list. For example, in Germany fishermen are given licences for ten to fifteen years. That is a basis for investments, employing people and building processing companies, which simply isn't an option, if you only have certainty for one year. Someone who needs to make a living in an area for a longer period, will be more inclined to opt for sustainability, anyway.'*

The others. *'We've left behind the time of quarrels and taking matters to court. The debates were no longer based on prejudice, growth in membership or group politics. Everyone's horizon was widened. Including ours.'*

Fishery
Jaap Holstein
Europeche/Cogega



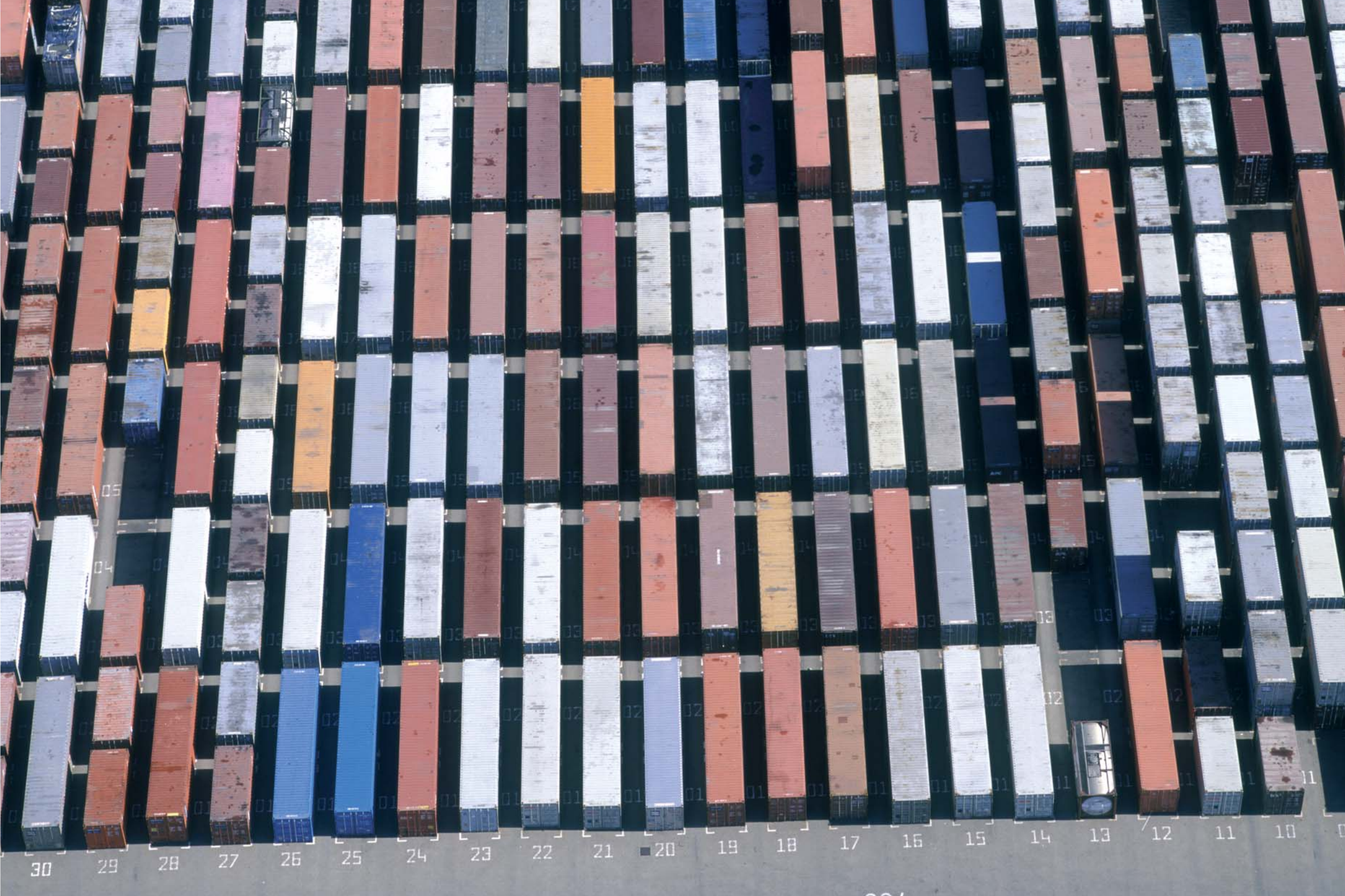
Local Government Authority
Ingbert Liebing
Gemeindeverwaltung Sylt-Ost

Powerful. *'At first, I was wary of the stacks of paper and the hassle of all those meetings. But then it turned out that the Wadden area is filled to the brim with expertise and energy. They have to be taken seriously. The three governments should follow our policy. We deserve the scope to make our own choices.'*

The others. *'We aren't looking for winners. All of us have gained something: experience, collaboration and understanding. That calls for a place in practical politics.'*

'Nothing is perfect, but this is a nice piece of work.'

1 2 3 4 5 6 7 8 9 10



Outlook

06

6.1 Introduction

The Wadden Sea Forum was established as an independent platform of stakeholders from the Wadden Sea Region with the task of developing scenarios for sustainable development and strategies to implement these scenarios.

The work in the Forum has shown how essential it is to discuss sustainable development in the form of a dialogue between all involved stakeholders. It has also become clear that the strategies for sustainable development contained in this report are not the end of the work but rather the start of a process in which the strategies are being implemented by all parties involved. The strategies have found broad support, both in the sectors represented in the Forum and at the Regional Conferences. During the Regional Conferences the work of the Forum was received positively, but it was also made clear that the strategic recommendations should be followed by concrete activities. The WSF members feel committed to continue the work on the strategies and underline the importance of and the need for a non-statutory body to discuss sustainable development matters in the Wadden Sea region. They therefore recommend the continuation of the Wadden Sea Forum or a comparable body of which tasks and structure are outlined in the following.

6.2 Tasks of a future forum

A future Forum should have the following tasks:

1. Oversee, stimulate, support, facilitate and evaluate the implementation of the strategies. The strategies for sustainable development need further specification into concrete actions and implementation of these actions, to be laid down in an Action Plan.
2. Encourage the further dialogue between stakeholders in the region. The experience with the WSF has shown the value of cross-sectoral dialogue, especially to overcome old conflicts and find compromise solutions to opposing positions.
3. Inform each other and exchange views about relevant developments.
4. Initiate new initiatives and actions.

Concrete activities to implement these tasks include:

- encouraging and promoting local and regional partnerships
- identifying and helping access funding
- capturing political support at local, regional and national levels
- raising awareness of existing human, physical and natural assets
- providing information to policy makers, administrators and communities
- monitoring progress towards a more sustainable future
- providing strategic leadership in the planning and coordination of regionally significant projects
- advising on best practice (for example, in balancing the development of recreational amenities and opportunities with the preservation of natural, scenic, historic, cultural and other environmentally sensitive resources)
- promoting and market the area stressing local produce, local places and regional distinctiveness
- providing advice to relevant international conferences

6.3 Participation

The participation in a future Forum should be comparable to that of the current Wadden Sea Forum.

6.4 Structure

The future forum should consist of the plenary meeting, a Steering Committee and working groups.

The plenary forum is chaired by an independent chairperson. The Steering Committee consists of representatives of all parties participating in the Forum and is chaired by the chair or the vice-chair. The main task of the SC is to prepare the plenary forum meetings. Ad-hoc working groups can be set up to discuss specific themes and to prepare Forum activities.

6.5 Meeting frequency:

Plenary Forum	1 meeting / year
Steering Committee	1 - 2 meetings / year
Working groups	On demand (Estimation: in total on average 4 meetings/yr)

6.6 Facilitation

A secretariat must facilitate the work of the Forum, the Steering Committee and the working groups.



Agriculture
Frans Keurentjes

Land- en tuinbouworganisatie NLTO

No romance. *'We have brushed aside the image of small, cosy and adorable farms. We need space to scale up and increase efficiency and local collaboration. But in their turn, agricultural businesses should stay away from places where they don't really belong. And leave those to nature and recreation.'*

The others. *'Cockle fishing was doomed anyhow, with or without the forum. And for the rest it is in everyone's favour that shipping safety features prominently on the agenda.'*

'A little higher for policy, much lower for popularity with the grassroots.'





Regional Government Authority
Ludwig Salverius
Stadt Norderney

Operational. 'The view on wind energy is a wonderful compromise between nature conservation, tourism and economics. Everyone is agreed that these big monsters should not be in clear view of the coast. A concrete success! At the moment, I am looking for brothers-in-arms to bring this home to the government of my federal state. The Forum has spoken. Loudly and clearly.'

The others. 'Tourism and nature conservation suddenly turn out to be partners. Both are strong advocates of conservation of landscape values. This insight is a clear gain for the future in several ways.'

'Everyone put their best foot forward.'



Energy
Werner K. Schuhbauer
RWE Dea AG

Complete. 'It has happened too often that we were working at cross-purposes. We've seen many well-intended individual initiatives come and go. But never before have we seen such a complete scenario (profit, people and planet). There is a broad base of support. I will continue to contribute in the future, perhaps especially during controversial meetings. That's where the real gains can be made.'

The others. 'All parties are well aware of the fact that they need the others. That is stimulating. Without prosperity there won't be welfare. Without economic growth nature conservation cannot exist.'

'A wide diversity of issues have been dealt with sensibly.'



'Because of involvement of external consultants it is not firmly embedded in the area itself.'

Meeting. 'Safety is a key issue. Important for all parties. And something we need to keep focusing on in the future. Just like tourism. I will commit myself to this. For example, by agreeing with the Mayor of Texel to develop joint programmes.'

The others: 'Unfortunately, the agreements concerning tourism did not come into their own. The actual collaboration between the three countries, in particular, offers much scope for improvement.'

The Wadden Sea Municipalities
Vagn Therkel Pedersen
Bredebro Kommune



Ribe and Sonderjyllands Counties
Jens Andresen
Provincial representative

Clear. 'Of course, it is possible that afterwards participants get scared and change their mind. But I don't think so. And if it does happen, there is not only a written document to which we can hold them. They have also openly declared their intentions. Once the ministers have confirmed the objectives with their signature, we can begin implementing them in earnest.'

The others. 'A clash of opinions and cultures has resulted in mutual acceptance. To gather and keep such a variety of opinions under one roof was a nerve-wracking, but exciting process.'

'Balance between protection and economy.'





Annex 1:

Complete List of WSF Shipping Recommendations

Complete list of WSF recommendations concerning Maritime Safety and Pollution Prevention by Shipping

To improve maritime safety and pollution prevention by shipping in the wider Wadden Sea area (i.e. the southern North Sea) the following recommendations are put forward by the WSF:

1. Spatial Planning - Offshore installations and Shipping

Rec 1. The planned offshore installations require new considerations for the safety of shipping. A trilaterally harmonised spatial planning procedure for the Exclusive Economic Zone (EEZ) must be initiated and developed in order not to increase the overall risk for people and nature.

- Such offshore installations require a shipping safety concept considering additional stationing of Emergency Towing Vessels (ETV), installation of radar supported Automatic Identification System (AIS) as well as Traffic Separation Schemes (TSS) in certain areas.
- In addition, the planning process must include the consideration of traditional shipping routes and shipping activities as well as the enlargement of the safety radius around offshore installations⁴ and aerial surveillance.
- Within this joint process the integration of environmental, nature and economic policies as well as the legislation in the Dutch EEZ must be accelerated.

Rec 2. Depending on the further development of offshore wind farms off the North Friesian and Danish west coast it might be advisable to establish a routing system and Vessel Traffic Services (VTS⁵) / Vessel Traffic Management and Information System (VTMIS⁶) in the area.

⁴ In Germany the minimum safety distance between the outer boundary of a wind farm and existing TSS is defined 500 m safety radius (acc. to UNCLOS Art. 60) plus 2 nautical miles (corresponding to COLREG, rule 10). In Deutschland ist der Minimalsicherheitsabstand zwischen der äußeren Begrenzung eines Windparks und eines Verkehrstrennungsgebietes mit einem Sicherheitsradius von 500 m definiert (s. UNCLOS Art. 60) plus 2 Seemeilen (s. COLREG, rule 10).

⁵ Vessel Traffic Services - VTS - are shore-side systems which range from the provision of simple information messages to ships, such as position of other traffic or meteorological hazard warnings, to extensive management of traffic within a port or waterway. Generally, ships entering a VTS area report to the authorities, usually by radio, and may be tracked by the VTS control centre. Ships must keep watch on a specific frequency for navigational or other warnings, while they may be contacted directly by the VTS operator if there is risk of an incident or, in areas where traffic flow is regulated, to be given advice on when to proceed. SOLAS Chapter V (Safety of Navigation) states that governments may establish VTS when, in their opinion, the volume of traffic or the degree of risk justifies such services. [www.imo.org/Safety/mainframe.asp?topic_id=387, cited 06.09.04]

⁶ Vessel Traffic Management and Information System (VTMIS) is a more detailed description of VTS and may include for example Port Information Management Systems etc.

2. Shipping safety and ship's safety

2.1 Navigation

Rec 3. The WSF welcomes the efforts for effective Vessel Traffic Management and Information Systems (VTMIS) and proposes to further develop the systems by integrating the different techniques and co-operating with a view to the wider Wadden Sea region from Rotterdam to north of Blavand (see also 1. Spatial Planning).

- In addition, the WSF emphasizes on the importance of co-ordinated implementation of the EC Directive 2002/59/EC (monitoring and information exchange), Safe Sea Net, AIS network and respective IALA⁷ objectives.

Rec 4. Immediate implementation of the ERIKA II-package in respect of VTMIS is to be carried out by the Netherlands.

Rec 5. A trilateral harmonised monitoring system for ships based on AIS must be established along the trilateral coast in accordance with the deadline decided upon in the Esbjerg Declaration⁸ but not later than stated in the EC Directive 2002/59/EC for all relevant traffic in the wider Wadden Sea region.

- This will allow easier identification of ships to the benefit of shipping safety. In addition, violations against mandatory routing systems and restrictions of shipping in the inner traffic zone can be identified and corrected.
- The AIS system must be supported – and integrated – by means of state of the art systems (e.g. radar) for safety reasons and because not all traffic members are obliged to use AIS.
- The voluntary use of AIS equipment on board ships less than 300 gt must be stimulated in order to increase the safety of shipping.

Rec 6. VTS similar to the VTS German Bight must be provided in the Netherlands, especially including the TSS Off Vlieland. The Dutch Deep Water routes must be altered completely to TSS routes via the IMO.

Rec 7. Prior to reduction measures regarding aids to navigation (e.g. lateral buoy system to centre-line system) adequate safety assessments/risk analysis must be commenced.

⁷ IALA = International Association of Lighthouse Authorities

⁸ Esbjerg Declaration Shipping, para 60, page 18: "... shall be strived for not later than 1 July 2005"

Rec 8. The WSF proposes to consider bringing Dutch manned lighthouses, which are not active in VTS, under the umbrella of the Netherlands coastguard. This could assist observation tasks and "on scene" coordination of search and rescue operations when needed.

2.2 Ship Standards

Rec 9. Mandatory basic safety refresher courses must be introduced by means of a trilateral initiative at EC and IMO level. Such basic safety courses and refresher courses must be enhanced by elements, such as emergency management, emergency towing and pollution response.

Rec 10. Trilateral initiative for an award scheme on EC and IMO level for ships which demonstrably fulfil ambitious safety and environmental standards.

Rec 11. Immediate ratification of the International Convention on the Control of Harmful Anti-Fouling-Systems on Ships (AFS Convention) by Germany and the Netherlands.

Rec 12. Support of the submission MSC⁹ 75/21 within IMO regarding the equipment of all ships down to a size of 300 gt with Emergency Towing Systems (ETS) except certain ships with a reduced risk profile.

3. Emergency Management

3.1 Mutual assistance in emergencies

Rec 13. The Joint Danish-German-Dutch response plan (DenGerNeth-Plan) which will replace the bilateral agreements (DenGer-, NethGer-Plan) must be signed as soon as possible, to provide an instrument for trilateral response action in the case of incidents involving oil and other harmful substances in the PSSA Wadden Sea and adjacent areas.

Rec 14. The WSF proposes the establishment of a joint coastguard working group to investigate the option of a trilateral common coastguard.

⁹ MSC = Marine Safety Committee, subgroup of IMO Schiffssicherheitsausschuss, Untergruppe der IMO

3.2 Emergency towing

Rec 15. A trilateral strategic emergency towing concept in consideration of the development of shipping and ship dimensions and offshore installations (see also 1. Spatial Planning) must be established. In this concept, the issue of standardisation (e.g. regarding dimensions and manoeuvring qualities) shall be investigated. Furthermore the concept shall include the following points:

- When deploying or developing new Emergency Towing Vessels an adequate* bollard pull has to be ensured.
- 24-h-availability of adequate* ETV capacities on stand-by mode at strategic sea positions has to be ensured. A maximum response time (time for the ETV to reach the vessels in distress) of 2 hours has to be ensured.

* In Germany adequate bollard pull (bp) is defined as: "in accordance with the present performance (at least 160 t bp, 17.5 knots trial speed) and the draft must be reducible to 6 m".

* In NL: in addition to MS WAKER (large ETV) it is advised to consider supplementary ETVs stationed near the Wadden Sea region and the Zeeland estuaries.

* In DK: Due to increasing traffic along the Danish west coast the Danish government is requested to reconsider the stationing of an ETV at the west coast, or to sign a contract to charter specified ETV capacity in case of ship accidents.

- Moreover, the WSF advises improved coordination with regard to required ETV capacities in a wider perspective. Norway, DK, GER, NL, Belgium and UK should be called upon to co-ordinate their respective needs and decide on the strategic positioning of ETV in the whole central and southern North Sea.

3.3 National pollution response management

Rec 16. The WSF recommends ensuring 24-h-availability of an adequate pollution response vessel.

Rec 17. The WSF recommends the immediate ratification of the "International Convention on Oil Pollution Preparedness, Response and Cooperation" (OPRC-HNS Convention) by Germany and Denmark.

Rec 18. The Directorate General for Public Works and Water Management in the Netherlands must gear up its pollution combating organization to a larger discharge of oil than 30,000 cbm per 3 days.

Rec 19. The WSF welcomes the new Emergency Handling Coordination Plan for the Dutch Wadden Sea for cooperation in the case of emergencies and urges the responsible authorities to implement it. In addition an "Air Mobile" fire brigade must be established and made available to the Dutch coastguard for quick response purposes.

Rec 20. Denmark must deploy a pollution response vessel and spill response equipment with a volumetric capacity of more than 1,600 cbm per day.

Rec 21. The WSF recommends the further application of best available pollution combating technology and financing of research.

3.4 Places of refuge

Rec 22. The WSF welcomes the steps taken in the implementation of the EC Directive 2002/59/EC regarding Places of Refuge (PoR) by the three Wadden Sea States.

- The national concepts concerning the handling of PoR and the necessary equipment must be trilaterally coordinated and regularly reconsidered and thus further developed.
- Adequate transparency of the concepts and the level of their practical implementation must be achieved by informing the local authorities and the public concerned.

4. Illegal discharges

4.1 Regulations

Rec 23. The WSF recommends harmonisation in the interpretation of the EC Directive 2000/59/EC on port reception facilities regarding:

- principles of fees (e.g. No Special Fee System)
- parameters for fee calculation (not or not only gt related)
- no limitations of quantities and types of waste
- development of clear definitions for exemptions (e.g. frequent callers).

Rec 24. The designation of areas for ballast water exchange and adequate reception facilities for ballast water and sediments have to be ensured to avoid the invasion of alien species in the wider Wadden Sea region.

4.2 Aerial surveillance

Rec 25. Instead of reducing aerial surveillance, the WSF underlines the importance of aerial surveillance and urges the three governments to follow the decisions already agreed upon. The WSF also advises that

- the extension of the coverage of aerial surveillance to new routes and offshore installations (e.g. wind farms, platforms) should be considered;
- state-of-the-art aerial surveillance technology must be applied (for example, LFS, MWR);
- an EC maritime pollution database regarding aerial surveillance must be introduced;
- national authorities must provide compatible aerial surveillance raw data for detailed analyses with the aim of developing a maritime pollution database;
- in addition to basic statistics, harmonised geo-statistical analysis and tools regarding aerial surveillance must be introduced.

4.3 Compensation and liability

The WSF recommends:

Rec 26. An initiative at EC level to set up a temporary International Oil Pollution Compensation Supplementary Fund (COPE-Fund) that could be cancelled as soon as an adequate measure can be put in place at IMO level.

Rec 27. Ratification of the Bunkers Convention by the Netherlands and Germany.

Rec 28. Ratification of the Hazardous and Noxious Substances (HNS)-Protocol by the three Wadden Sea states.

Rec 29. Immediate implementation of the EC Directive on ship-source pollution and on the introduction of sanctions, including criminal sanctions, for pollution offences (2003/0037 COD).

5. Port State Control (PSC)

The WSF recommends:

Rec 30. Intensifying the harmonisation of Port State Control (PSC) procedures (e.g. checklists, interviews, internal quality standards etc.).

Rec 31. The expansion of human resources for PSC tasks in the Netherlands.

Rec 32. That pilots are to inform PSC in case of apparent deficiencies.

Rec 33. The immediate implementation of 2001/106/EC [EC 2001b] on PSC by the Netherlands.

Rec 34. Intensifying the exchange of Port State Control Officers (PSCO) to ensure harmonisation and consistency of information.

Rec 35. Intensifying the development of joint PSKO training and qualification measures in general, and on special issues in particular (e.g. cargo securing, security, forged certificates, etc.).

¹⁰ e.g. 2nd North Sea Conference decisions

ANNEX 2: MEMBERS				
Chairman Ed Nijpels. Queen's Commissioner of the Province Fryslân, The Netherlands				
	Denmark	Schleswig-Holstein	Niedersachsen	The Netherlands
Agriculture	Kristen Fromsejer <i>De Danske Landboforeninger</i> Erik O. Petersen <i>Dansk Familielandbrug</i>	Hans-Peter Witt <i>Bauernverband S-H</i> Hans Peter Stamp <i>Bauernverband S-H</i>	Erich Hinrichs <i>Landwirtschaftlicher Hauptverein Ostfriesland</i>	Frans Keurentjes <i>NLTO</i> Jurjen Kingma <i>NLTO</i>
Tourism and Recreation	Knud Hansen <i>Tidl.borgmester Højer</i> Niels Henrik Simonsen <i>Danmarks Jægerforbund</i>	Dirk Schumaier <i>Nordsee-Bäderverband S-H e.V.</i> Ursula Belker <i>Stadt Husum</i>	Holger Kohls <i>Nordseebad Wangerooge</i>	Martin Loos <i>NNWB</i> Steef Engelsman <i>ANWB</i>
Nature and Environmental Protection	Svend Tougaard <i>Danske Vadehavsgroupe</i> Uffe Eskildsen <i>DNF</i>	Hans-Ulrich Rösner <i>WWF-Projektbüro Wattenmeer</i>	Holger Wesemüller Carl-Wilhelm Bodenstern-Dresler. <i>BUND</i>	Hans Revier <i>Seas at Risk</i> Herman Verheij <i>Waddenvereniging</i>
Fisheries	Carsten Krog <i>Danmarks Fiskeriforening</i> Oluf Stenrøjl Kristensen <i>Danmarks Fiskeriforening</i>	Andries de Leeuw <i>Landesverband S-H Angler und Fischer e.V.</i> Peter Ewaldsen <i>Petersbüll</i>	Peter Breckling <i>Deutscher Fischerei Verband</i> Manuela Gubernator <i>NdS Muschelfischer GbR</i>	Anton Verbree <i>Stichting van de Nederlandse Visserij</i> Jaap Holstein <i>EUROPECHE/COGEGA</i>
Industry and Harbor	Henning Nørgaard <i>Esbjerg Havn</i> Flemming Thyme <i>Kystdirektoratet Lemvig</i>	Peter Becker <i>IHK Flensburg</i>	Michael Ahrens <i>IHK Oldenburg</i> Jan Amelsbarg <i>IHK Ostfriesland und Papenburg</i>	Hans Haerkens <i>VNO-NCW Noord</i> Symen v.d. Velde
Energy		Werner K. Schuhbauer <i>RWE Dea AG</i>	Eckhard Heyse <i>Wilhelmshavener Raffineriegesellschaft mbH</i> Frank Oswald <i>Wilhelmshavener Hafenwirtschafts-Vereinigung e.V.</i>	Wim P. Groenendijk <i>Nogepa</i> Margriet Kuijper <i>NAM B.V.</i>

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	Denmark	Schleswig-Holstein	Niedersachsen	The Netherlands
Regional Government Authority	Jens Andresen <i>Sønderjyllands Amt</i> Thyge Nielsen <i>Ribe Amt</i>	Jörn Klimant <i>Kreis Dithmarschen</i> Olaf Bastian <i>Kreis Nordfriesland</i>	Walter Theuerkauf <i>Landkreis Aurich</i> Bernhard Bramlage <i>Landkreis Leer</i>	Patrick Poelmann <i>Dutch Wadden Sea Provinces (SWP)</i> Hans Schipper <i>Dutch Wadden Sea Provinces (SWP)</i>
The Wadden Sea Municipalities	Vagn Therkel Pedersen <i>Bredbro Kommune</i> Kjeld Nielsen <i>Fanø Kommune</i>	Ingbert Liebing <i>Gemeindeverwaltung Sylt-Ost</i> Dieter Harrsen <i>Amt Pellworm</i>	Ludwig Salverius <i>Stadt Norderney</i> Reinhard Kaib <i>Inselgemeinde Borkum</i>	Joan Stam <i>Gemeente De Marne</i> Rob v.d. Mark <i>Gemeente Vlieland</i> Joke Geldorp-Pantekoek <i>Gemeente Texel</i>
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State Government Authority (Observer)	Henrik Wichmann <i>Skov- og Naturstyrelsen</i>	Klaus Koßmagk-Stephan <i>Landesamt für den Nationalpark S-H Wattenmeer</i> Bernd Scherer <i>Ministerium für Umwelt, Naturschutz und Landwirtschaft</i> Jacobus Hofstede <i>Innenministerium</i>	Hubertus Hebbelmann <i>Umweltministerium</i>	Bernhard Baerends <i>Min. Landbouw Natuurbeheer en Visserij</i> J. Blok <i>Ministerie van Economische Zaken</i> Michel v.d. Veen <i>Ministerie van Economische Zaken</i>
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