



The Wadden Sea, Germany and Netherlands (N1314) – Extension Denmark and Germany

Supplementary Information
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Photo: J. Frikke

1. Introduction

The IUCN has by letter of 13 December 2013 requested supplementary information on a number of points related to the Danish-German Extension Nomination of the Wadden Sea World Heritage. More in particular, the IUCN requests additional information on the following four points:

1. *The nomination proposes the inclusion of the government-owned parts of the barrier islands of Rømø and Fanø (in Denmark), where public access is allowed within the nominated area and where human pressure and associated threats are and will have potential to impact the property, particularly parts of the beaches on Rømø and Fanø islands that are heavily used by private vehicles. Considering that the mission understood those activities will continue in future, the State Party is requested to submit additional information on the reasons for including these parts in the property and the measures that will be taken to reduce the impacts, or to consider revising the boundaries so as to exclude those heavily impacted areas from this nomination.*
2. *We would appreciate if the State Party could provide a succinct summary, and the relevant supporting documentation, outlining the collaboration between the Danish Nature Agency and the Danish Wadden Sea National Park authority related to the nominated property, including division of roles and responsibilities.*
3. *It was stated during the mission, in both Denmark and Germany, and that the wind farms do not have significant impact on bird populations and that environmental impact*

studies have been carried out to demonstrate this. We would be grateful to receive copies of the relevant sections of these assessments and a brief summary of the conclusions regarding impact, and the reasoning for this, together with information on measures that have been taken (or are planned for) to avoid impacts. We noted that one recent paper pointed out the impact that power lines (from the wind farms) across the tidal flats to Fanø and Rømø have on large numbers of birds (Rasmussen 2008), and would appreciate the comments of the State Parties on this matter. We would further welcome clarification regarding how the cumulative and incremental impacts of different developments has been considered, and also a succinct statement on the anticipated approach to further developments.

4. *We would appreciate further information about who develops the grazing plans for the property, and notably for the Danish extension how much control the Nature Agency and/or Park has over these plans, what research and monitoring is being undertaken to determine the optimum level of grazing, and who is responsible for control and enforcement of the grazing plan.*

Attached are the responses to the four points. The requested information on the points no. 1 and 2 is provided by the state party of Denmark, the information on point no. 3 is provided jointly by the state parties of Denmark and Germany whereas the supplementary information on point no. 4 is collectively provided by the three states parties of Denmark, Germany and The Netherlands as called for in the IUCN letter.



Photo: J. Frikke

2. Supplementary Information

1. Supplementary information on beaches on Rømø and Fanø islands

Re. 1 *The nomination proposes the inclusion of the government-owned parts of the barrier islands of Rømø and Fanø (in Denmark), where public access is allowed within the nominated area and where human pressure and associated threats are and will have potential to impact the property, particularly parts of the beaches on Rømø and Fanø islands that are heavily used by private vehicles. Considering that the mission understood those activities will continue in future, the State Party is requested to submit additional information on the reasons for including these parts in the property and the measures that will be taken to reduce the impacts, or to consider revising the boundaries so as to exclude those heavily impacted areas from this nomination.*

In consultation with our co-signers of the nomination, the Danish Ministry of Environment has decided to revise the boundaries of the Danish part of the nomination as to exclude the heavily impacted areas on the beach on Rømø. The excluded area amounts to 2.254 ha.

The heavily impacted areas of the beaches on Fanø were not part of the nomination in the first place and therefore need no further response.

The new boundaries of the nomination related to the changes on Rømø are shown on Figure 1 and the revised maps in Annex 1.

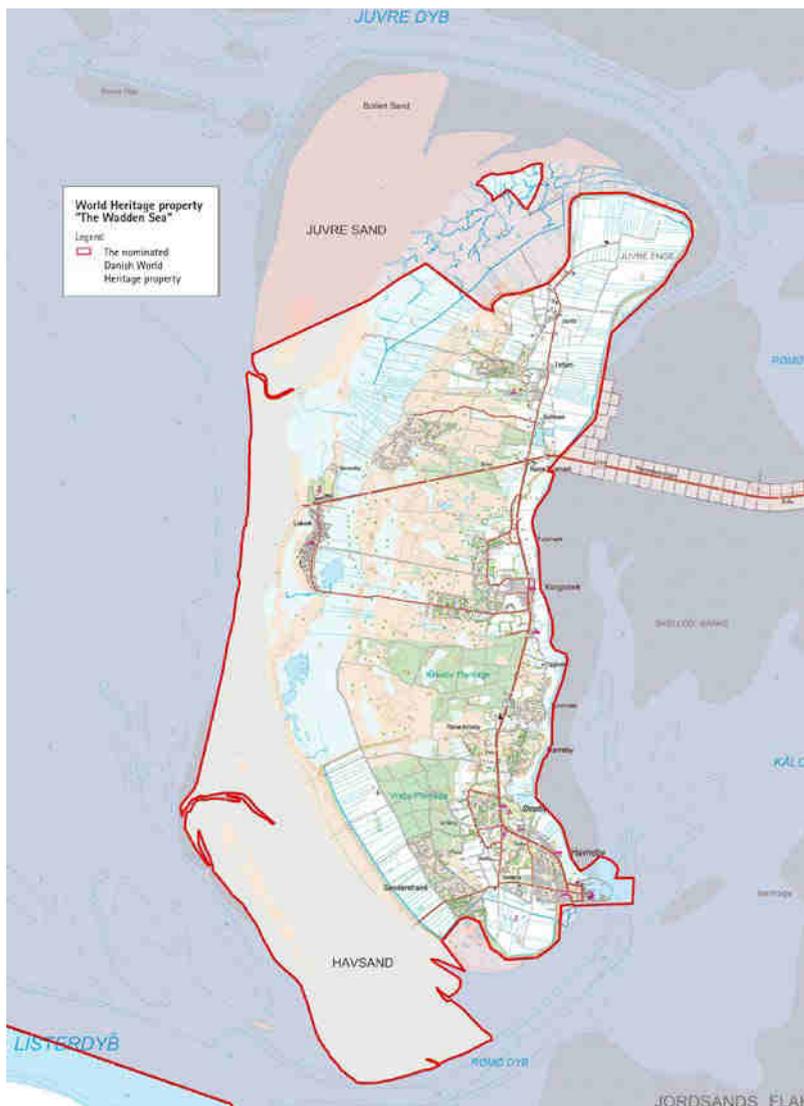


Figure 1:
Revised boundary of the
World Heritage nominated
property on Rømø.

2. Supplementary information on collaboration Danish Nature Agency and Danish Wadden Sea National Park

Re. 2 *We would appreciate if the State Party could provide a succinct summary, and the relevant supporting documentation, outlining the collaboration between the Danish Nature Agency and the Danish Wadden Sea National Park authority related to the nominated property, including division of roles and responsibilities.*

Roles and responsibilities

With the nomination of the Danish Wadden Sea area as a World Heritage Site, the Danish Government and its relevant institutions has committed itself to implement the UNESCO World Heritage Convention for the entire nominated Wadden Sea area together with the relevant responsible authorities in Germany and The Netherlands as a joint responsibility for one World Heritage Site.

The Nature Agency

The Nature Agency under the Ministry of Environment is the competent authority for the implementation of key legislation in the nominated property in the Danish part of the Wadden Sea, in particular the Statutory Order on the Nature and Wildlife Reserve Wadden Sea as well as relevant EU legislation and associated monitoring activities. The Nature Agency therefore will be the key legal institution which is responsible for the nominated property.

The Nature Agency is responsible for the management of state owned areas in the nominated property and within the national park. The Nature Agency is also responsible for a number of significant nature restoration projects in cooperation with municipalities and land owners.

The Nature Agency is also the focal point for the Danish participation in the Trilateral Wadden Sea Cooperation. The Agency holds two of the four seats in the Danish Delegation including that of Head of Delegation. As such, the Agency is the main responsible body for coordinating the Danish inputs to the Trilateral Wadden Sea Cooperation. The Nature Agency also participates in the work of a number of Task and Expert Groups under the Trilateral Wadden Sea Cooperation.

Furthermore, the Nature Agency is responsible for part of the information on the Wadden Sea through the internet, folders, signboards, ranger activities and information centers etc.

In relation to establishment and running of the National Park the Nature Agency has had the following roles¹:

- Responsible for publishing the Proposal for the establishment of the Wadden Sea National Park (2010) and the related public consultation process,
- Assisting the National Park's Board in developing rules of procedure,
- Serve as temporary secretariat for the National Park until a permanent secretariat is in place (2010-2011).

The Nature Agency continues to have the following role in relation to the running of the National Park:

- Permanent member of the National Park's Board,
- Assist the National Park in matters regarding administration, financial and human resource management,
- Supervise and support the development of the National Park and the implementation of the National Park Plan on behalf of the Minister of Environment,
- Assume responsibility for the management of natural areas, that have been acquired and restored by the National Park for nature protection (depending on the type and location of these areas this task can also be assumed by a municipality where appropriate),
- Make decisions on the overall marketing of Danish National Parks. In practice these means maintaining the common overall web-portal of the three present Danish National Parks and providing technical support to the running and development of the individual domains of the individual parks.

In connection with the formulation and implementation of management plans for the state owned areas inside the national park, the Nature Agency is also obliged to contribute to the fulfilment of the targets in the National Park Plan.

The National Park

The Danish Wadden Sea National Park is established as an independent state foundation under the Ministry of Environment. In accordance with the overall provisions of the National Park's Act the establishment of a National Park shall improve and strengthen the possibilities for coordinated

¹ According to the Statutory Order on the transfer of assignments and responsibilities to the Nature Agency and Sections 26-28 of the National Park's Act.

and long-term developments of nature, landscape, geological, heritage and recreational values in synergy with national interests, the local population and businesses with 10 specific purposes (Annex 14 of the Dossier).

The National Park has, as a partner, supported the Danish nomination along with three municipalities.

The development of the national park is based on a National Park Plan which is to be revised every 6 years in harmony with the planning cycle of the Natura 2000 plans.

To fulfill its purposes the National Park Foundation is allocated an annual budget from the National Budget which in accordance with the Statutory Order on the Wadden Sea National Park shall be used:

- 1) to conserve, strengthen and develop nature, its diversity, cohesion and dynamics, particularly for shallow waters of international significance, tidal waters, salt meadows and other coastal nature areas,
- 2) to conserve and strengthen landscape and geological values in the unique Wadden Sea landscape,
- 3) to conserve and strengthen heritage values of the National Park,
- 4) to improve the opportunities for exceptional nature and heritage experiences and outdoor activities in the Wadden Sea landscape,
- 5) to strengthen research, learning, nature awareness guidance as well as dissemination of the values of the Wadden Sea landscape,
- 6) to support developments benefiting local communities, including the business community, with respect for protective interests, and leaving room for continued operation and development of agriculture and fisheries and
- 7) to contribute to a coordinated development of the Danish/German/Dutch Wadden Sea area.

As part of its operations, the National Park can buy and sell land, provide financial and technical support, act as fund raiser and publish information. The National Park has legal authority and relies on voluntary means and cooperation with private and public partners.

In line with purpose 7 above, the National Park also takes part in the Trilateral Wadden Sea Cooperation.

Organizational structures

The Nature Agency

The Nature Agency consists of 23 nature management units across Denmark with approximately

850 employees and a central Head Office in Copenhagen with approximately 450 employees.

Two local units – i.e. the Nature Agency Blaavandshuk and the Nature Agency Wadden Sea are the two local units in the Wadden Sea Region with the latter being the focal point for the cooperation with the National Park. The Head Forester from the Nature Agency Wadden Sea unit is the ministerial representative on the board of the National Park.

In relation to the Trilateral Wadden Sea Cooperation, the Nature Agency has two seats in the Danish Delegation which includes the role as Head of Delegation. The other two seats are held by a representative of the Wadden Sea municipalities and the Head of the National Park Secretariat.

The National Park

The National Park is under the governance of the National Park's Board with 15 members:

- A chairman appointed directly by the Minister of Environment,
 - 4 members from the City Councils of the 4 Wadden Sea municipalities,
 - 1 representative from the Ministry of Environment (The Nature Agency),
 - 2 members representing the National Park Advisory Board,
- 1 local representative from each of the following organisations:
- The Outdoor Council,
 - The Nature Conservation Society,
 - The Danish Hunters' Association,
 - The Danish Angling Association,
 - Birdlife Denmark,
 - The Dike Associations,
 - The Farmers' Association.

To advise the Board, an Advisory Council with 30 members coming from relevant organizations or specific local communities has been appointed.

Day to day business of the National Park is being run by a National Park Secretariat with presently 5 permanent staff positions.

As mentioned above, the National Park Secretariat holds a seat in the Danish delegation to the Trilateral Wadden Sea Cooperation. On top of this the Secretariat also participates in the work of relevant task and expert groups under the Trilateral Cooperation. This is closely coordinated with the Nature Agency and the Municipal Wadden Sea Secretariat.

As part of its activities the National Park is also supporting an interdisciplinary research committee advising on research initiatives in the Wadden

Sea and representing Danish Research institutions in Trilateral Research meetings, workshops etc.

The National Park is represented in the Wadden Sea Forum with a member from the National Park Advisory Council.

As part of its activities, the National Park is implementing a National Park Partner Programme which currently has 81 partners.

Collaboration

Collaboration between the Nature Agency and the National Park takes place through numerous formal and informal channels:

- Representation of the Nature Agency on the National Park's Board,
- The Danish delegation to the Trilateral Wadden Sea Board,
- Coordination of and agreement on representation in trilateral task and expert groups (e.g. TG Sustainable Tourism, TG World Heritage, TG Management, the PROWAD Project, Migratory and Breeding Birds),
- Regular meetings of a coordination group between the Wadden Sea Municipalities, the Nature Agency and the National Park,

- The Wadden Sea Interpreters Forum where the Nature Agency and the National Park together with a number of information centres, museums and other public or semipublic institutions cooperate on developing information material, events and campaigns with the school programme "My Wadden Sea" as a key output. The work also includes coordination of the Danish input to the International Wadden Sea School and joint information and educational initiatives in cooperation with the other Danish National Parks,
- Semi-annual meetings between the Nature Agency and the three Danish National Parks at executive level,
- The National Park is using the accounting and administration services of the Nature Agency,
- The National Parks web portal www.danmarksnationalparker.dk.

Possible joint nature restoration projects either in or adjacent to the nominated property are currently being discussed in cooperation between the Nature Agency, the municipalities and the National Park.

3. Supplementary information on offshore wind farms and bird populations

Re. 3: *It was stated during the mission, in both Denmark and Germany that the wind farms do not have significant impact on bird populations and that environmental impact studies have been carried out to demonstrate this. We would be grateful to receive copies of the relevant sections of these assessments and a brief summary of the conclusions regarding impact, and the reasoning for this, together with information on measures that have been taken (or are planned for) to avoid impacts. We noted that one recent paper pointed out the impact that power lines (from the wind farms) across the tidal flats to Fanø and Rømø have on large numbers of birds (Rasmussen 2008), and would appreciate the comments of the State Party/ies on this matter. We would further welcome clarification regarding how the cumulative and incremental impacts of different developments has been considered, and also a succinct statement on the anticipated approach to further developments.*

The request for supplementary information encompasses the following four elements:

- i. Copies of the relevant sections of these assessments and a brief summary of the conclusions regarding impact, and the reasoning for this, together with information on measures that have been taken (or are planned for) to avoid impacts;
- ii. The comments of the State Party/ies on the impact that power lines (from the wind farms) across the tidal flats to Fanø and Rømø have on large numbers of birds (Rasmussen 2008);
- iii. Clarification regarding how the cumulative and incremental impacts of different developments have been considered;
- iv. A succinct statement on the anticipated approach to further developments.

Before responding to the above, it is important to acknowledge the overall trilateral policy on wind farms with regard to the existing and nominated property as stipulated in the Wadden Sea Plan and in Ministerial (Council) Declarations agreed at the Wadden Sea Ministerial Conferences. This information was also included, as appropriate in the nomination document of the 2008 nomination of the Dutch-German Wadden Sea and in the current extension nomination.

The Wadden Sea Plan (2010) in para. 3.18 (and in identical para's 4.17, 7.4, 8.4 and 9.11) decrees that "[T]he construction of wind turbines in the Nature Conservation Area is prohibited". The Nature Conservation Area is basically identical with the property and the nominated extension. In para 3.19 (and in identical para's 4.18, 7.5, 8.5, and 9.12), the Wadden Sea Plan furthermore decrees that "[T]he construction of wind turbines, in the Wadden Sea Area outside the Nature Conservation Area, is only allowed, if important ecological and landscape values are not negatively affected". In para 3.17 (and in identical paras 4.19; 5.10; 7.3), the Wadden Sea Plan also decrees "To concentrate cable crossings through the Wadden Sea within a minimum of cable corridors and a minimum of cables, using the best available techniques, e.g. cables with highest capacity available, and avoiding salt marshes crossing as far as possible, and to communicate regularly on this item in order to use synergies."

The Wadden Sea Area is the area for which the Wadden Sea Plan is valid within which the property is located as outlined in the nomination document, page 18 and 143ff. The construction of wind turbines in the offshore zone was also addressed in the Ministerial Declaration of the 10th Trilateral Governmental Conference on the protection of the Wadden Sea in 2005. The Declaration, in §§ 21, stipulates that "[I]n order to balance the landscape and natural values of the offshore zone and to retain a high safety standard for shipping we agree that the construction of new offshore wind energy installations not already in planning should be avoided within the territorial sea adjacent to the Wadden Sea Area".

The construction of wind farms within the property is hence prohibited and within the Wadden Sea Area only allowed, if important ecological and landscape values are not negatively affected. Wind farms are located landwards adjacent to the property in Germany and a few locations landwards to the extension nomination site in the Danish part. The offshore wind farms are located outside the extension nomination in a substantial distance of about 10-15 km as specified below.

As regards the specific requests, the following apply:

Re. i Copies of the relevant sections of these assessments and a brief summary of the conclusions regarding impact, and the reasoning for this, together with information on measures that have been taken (or are planned for) to avoid impacts:

Environmental Impact Studies are regularly carried out on different levels of planning and approval of Offshore Wind Farms. Relevant examples for those assessments are attached to this supplementary information as Annex 2 and referred to in the following text.

In Denmark, there are no windmills inside the nominated extension. One major cluster area, completed in 2009 is located approx. 14 km west of Blaavandshuk. With 80 mills, Horns Rev Windmill Farm covers an area of approx. 20 km² and produces on average 2% of the annual Danish power consumption. The shortest distance from the farm to the nominated extension is 8.5 km.

The Danish Energy Agency is the competent authority for planning and erecting wind turbines on the sea territory. Besides already existing wind farms and approval of present project proposals, environmental impact assessments are continuously analysed.

The Danish Energy Agency is the competent authority for planning and erecting wind turbines on the sea territory. Besides already existing wind farms and approval of present project proposals, environmental impact assessments are continuously analysed.

From 1999 to 2006 an intensive monitoring programme was performed on the environmental impacts from the farms at Horns Rev and Nysted, a location in the Baltic Sea, where a wind farm has been constructed, and it was concluded that the birds in general avoided the wind farm areas and that some bird species were excluded from some of their feeding areas. The risk of birds colliding with mills was quite small. The effects on population levels were insignificant. No effects inside the nominated extension were reported.

The programme was among other things followed up by a less intensive bird survey programme in 2007 with focus on the Horns Rev farm. The results of the research (Annex 2, Petersen et al., 2006) showed a significant overlap between the spatial distribution and the common scoter and their prey. It was concluded that Common

Scoter may indeed occur in high densities between newly constructed wind turbines at sea, but this may only occur a number of years after initial construction. It could not be excluded the explanation that this reflected changes in food supply rather than a change in the behaviour of the birds themselves. There was no sign that divers, previously concluded to avoid the area of the wind farm and its surroundings, had changed their distribution relative to the wind farm.

In Germany, there are no wind farms inside the nominated extension too as indicated in the introduction. In the Exclusive Economic Zone, one cluster area is located at a distance of app. 15 km northward outside the proposed offshore extension area, separated by the southern traffic separation scheme. The first wind farm, completed in 2009, was the pilot project "Alpha Ventus" in the priority area "North of Borkum", with 12 turbines. Inside Niedersachsen coastal waters, two priority areas for wind farms were designated by the State Planning Programme, which at the same time excluded further offshore wind farm developments anywhere within the Niedersachsen coastal waters. The area 'Borkum Riffgrund' lies more than 20 km far away from the nominated offshore extension. The wind farm 'Nordergründe' is adjacent (distance min. 500m) to the nominated extension within the Elbe-Weser-triangle. 'Nordergründe' passed the licensing procedure, including Environmental Impact Assessment and Appropriate Assessment (see Annex 2) according to the EU Habitats Directive, allowing 18 wind turbines, which have not been erected so far.

Based upon up to date information on nature and environment, wind farms are spatially regulated by the Maritime Spatial Plan German for the German Exclusive Economic Zone (EEZ) (see Annex 2, BSH 2009) and the State Planning Programme Niedersachsen for coastal waters in Niedersachsen. These spatial plans stipulate priority areas and preferred areas for wind energy as well as for nature conservation and have specific excluding effects. These stipulations are to be followed at the approval level. When drawing up these spatial plans, extensive Strategic Environmental Assessments and Appropriate Assessments according to the EU Birds and Habitats Directives were carried out.

To investigate and to assess potential ecological effects of offshore wind farms on birds was one of the main issues of a number of accompanying monitoring, survey and research projects such as BEOFINO, MINOS, MINOS+, StUKplus. Their main results are summarised best in the Environmental

Report, which is part of the Maritime Spatial Plan German EEZ (see Annex 2, BSH 2009).

The effects of construction and operation of offshore wind energy facilities on seabirds in the North Sea EEZ can lead to habitat loss and can be recorded and quantified, or predicted, in the field. Assessments are based on previous results for existing Danish offshore wind farms (Horns Rev and Nysted) and predictions made for concrete plans in the German North Sea EEZ. On the whole, the effects of wind farms on seabirds in the priority areas for wind farms in the EEZ will probably be insignificant (see Annex 2, BSH 2009).

Several million birds annually migrate across the German Bight. Songbirds, the majority of which cross the North Sea at night, represent the greatest portion. The construction and operation of offshore wind energy farms in the EEZ are anticipated to have scare and barrier effects on migratory birds. Bird strike can occur on the structures while under construction as well as on all wind farm facilities during the subsequent operational phase. Additional attraction and blinding effects which increase the risk of bird strike can also be caused by illumination at night. Species-specific observation revealed that the construction and operation of offshore wind energy facilities poses no threat for the majority of migratory bird species or their biogeographical populations found in the North Sea. The available findings on the migratory behavioural patterns of various bird species, the customary flight altitudes and the daytime distribution of bird migrations allows the conclusion that a majority of migratory birds will not be affected at all by the projects in the priority areas. As a result of the Strategic Environmental Assessment, it is to be stated in conclusion that no significant effects on the subject of seabirds protection, as well as on the subject of migratory birds protection, are to be anticipated through the designations for wind energy in the Maritime Spatial Plan (see Annex 2, BSH 2009).

Seabird distributions within Niedersachsen coastal waters were thoroughly monitored and systematically determined too, using internationally standardised transect counts from ships and aircraft. Their distributions were analysed using geostatistical interpolation methods to derive concentration areas for each species. This led to an extensive designation of new Special Protection Areas under the EU-Birds Directive in 2007, where no offshore wind farms are allowed. In 2010, they were integrated into the National Park „Niedersächsisches Wattenmeer“ and are now part of the nominated offshore extension. The State Planning Programme considered all Special

Areas of Conservation (SAC according to the EU Habitats Directive) and Special Protection Areas (SPA according to the Birds Directive) and avoided any overlap of these Natura 2000 areas with areas for offshore wind farms.

Within the framework of the approval procedure for offshore wind farms, potential adverse impacts of the planned facilities on the marine environment have to be assessed on project level. An accurate baseline study on migrating and marine birds within a potentially assessment region is part of the investigation standard to make sure, that issues of bird protection are assessed and weighed appropriately against public interests about wind energy development. In the case of the 'Nordergründe' wind farm mentioned above, entrepreneur, state and green NGO's have signed an agreement on mitigation and compensation of potential adverse effects, which comprises i.a. bird monitoring, scientific effect surveys, switch off at nights of mass migration events and compensation measures.

In both countries, **Germany and Denmark**, a wide range of measures is carried out or planned for on different planning and approval levels to avoid negative impacts on bird populations. First of all, it is important to avoid any overlap with protected resp. sensitive areas. To carry out baseline inventories of birds resp. bird counts according to international standards and monitoring covering the whole marine area is to provide necessary information on spatial distribution patterns and flyways. Based on this, careful site selection via spatial planning process incl. consultation of all interested parties and Strategic Environmental Assessment and Appropriate Assessment according EU Habitats Directive and creation of appropriate distances shall ensure, that wind farm areas do not significantly affect these areas from the outside. At approval level, Environmental Impact Assessment and Appropriate Assessment according to the EU Habitats Directive are carried out, based on investigations according to a standard investigation framework resp. national guidance on EIA. At the level of wind farm layout (f. e. size and shape, pattern and number of turbines), this should be adapted to a site specific ecological sensitivity. Time frames for construction works could be set to further mitigate disturbance effects. During construction and operation phase, scientific effect surveys on birds at the offshore wind farm and its surroundings do take place. Operation control of wind farms during nights of mass migration events and the adaptation of lighting to avoid attraction resp. distraction of birds are taken into consideration.

Re. ii The comments of the State Party/ies on the impact that power lines (from the wind farms) across the tidal flats to Fanø and Rømø have on large numbers of birds (Rasmussen 2008):

Rasmussen (2008) describes adverse effects of overhead high voltage power lines from the mainland to the islands Romo und Fano on birds. These overhead power lines serve the islands and are not related to wind farms, nor land based or offshore.

As a consequence of a national political agreement most overhead high voltage 150 kV power lines in Denmark will be changed to underground cables. The local energy supplier (SydEnergi) has informed (pers. comm., 21 January 2014) the Danish Nature Agency, that there are no actual plans for the minor 60 kV lines to Romo and to Fano to be changed to underground cables.

Considering the statements in Rasmussen (2008), they are very poorly documented. The number of birds and the species affected by these two power lines are thus not known in detail and in the recently issued Natura 2000 plan for the Danish Wadden Sea area the power lines are not mentioned among the threats to conservation status of the area.

In neither the Dutch part nor the German part of the World Heritage property, as well as within the nominated offshore extension, overhead power lines exist – high voltage underground cables were always standard.

Re. iii Clarification regarding how the cumulative and incremental impacts of different developments have been considered:

Cumulative and incremental impacts are dealt with via spatial planning, which takes into account past and future wind farm developments and sums up environmental impacts on birds and other biota through Strategic Impact Assessments. According to the EU Habitats Directive, cumulative effects on protected areas are to be included in the Appropriate Assessment.

Re. iv A succinct statement on the anticipated approach to further developments:

The parties are committed to continue the common policy on wind farms as laid down in the Wadden Sea Plan including prohibiting the construction of wind turbines both within the existing as well as the extended nominated property. For the construction of new wind farms Strategic Impact Assessments, Environmental Impact Assessments and Appropriate Assessments according to the EU Habitats Directive will continue to be applied. They deliver a complete picture and overall assessment of potential environmental effects of future offshore wind farm development, i. a. on birds, based on up to date scientific knowledge.

4. Supplementary information on salt marshes

Re. 4 *We would appreciate further information about who develops the grazing plans for the property, and notably for the Danish extension how much control the Nature Agency and/or Park has over these plans, what research and monitoring is being undertaken to determine the optimum level of grazing, and who is responsible for control and enforcement of the grazing plan.*

The request encompasses three aspects:

- i. What research/monitoring is done to determine the optimum grazing level?
- ii. Who develops the grazing plans, and how much control does DK Nature Agency/National Park have?
- iii. Who is responsible for control and enforcement of grazing plans?

Before answering to the three aspects it is important to have a brief look at the Wadden Sea salt marshes as a context for the management. An extensive overview has been given in the nomination document in Chapter 4, the Quality Status Report 2009 – Thematic Report No. 8 Salt Marshes also showing the management schemes within the property and the Wadden Sea Plan 2010.

As outlined in the nomination document (page 106–107), all Wadden Sea salt marshes are subject to nature conservation schemes by national and EU legislation, and are also covered by the Wadden Sea Plan. The Wadden Sea Plan aims at an increased area of natural salt marshes, natural morphology and dynamics (including natural drainage of mainland salt marshes, under the condition that the present surface area is not reduced), and a salt marsh vegetation reflecting the geomorphological conditions of the habitat.

Natural salt marshes prevail on the barrier islands and, in the Northern Wadden Sea, also behind sandy barriers of the mainland. Along most of the mainland, salt marshes are man-made, and often consist of groins and ditches to facilitate sedimentation and drainage. The purpose of such a foreland in front of a dike is to dissipate wave energy during storm tides. Therefore, these salt marshes are important elements for coastal flood defence and protection.

On mainland salt marshes, the grazing intensity was high in the past, because it was assumed that when vegetation remained short and dense, the resulting lawns were better than natural

vegetation in preventing erosion on the foreland in front of seawalls. In the meantime, it has been demonstrated that higher vegetation can function likewise. Consequently, grazing intensity is now generally reduced to allow for higher plant diversity.

Today, a large proportion of the man-made marshes are allowed to grow according to the geomorphological conditions of the habitat, e.g. through reduction of artificial drainage, restoration of natural creek systems, and cessation of engineering measures as far as possible and according to local circumstances.

Re. i Optimum grazing level

According to the targets of the Wadden Sea Plan, livestock grazing, mowing and artificial drainage have decreased in the entire Wadden Sea since the 1980s and salt marsh use shifted from agricultural purpose to nature management. Salt marshes now support a variety of more naturally distributed vegetation types (see also Figure 4.2, p 106 of the nomination document). At present, grazing of mainland salt marshes is carried out as part of coastal defence measures or, in some areas, to aim for enhanced biodiversity and heterogeneity of salt marshes, and additional feeding, roosting or breeding habitats for birds.

At the Wadden Sea Day in August 2013, salt marsh experts discussed challenges and prospects for future salt marsh research, monitoring and management based on 40 years of experience. Succession to ageing of salt marshes was considered as a problem for management in some areas, when monotone vegetation dominated by some single species has developed on salt marshes with artificial drainage, high sedimentation rate and lacking rejuvenation process. Moderate grazing is a possible measure to increase vegetation dynamics and biodiversity among others such as restoration of natural dynamics through de-embankment of summer polders and restoration of natural creek systems, stimulating rewetting to achieve a complete hydrodynamic gradient.

Instead of defining an optimum level of grazing of salt marshes, the experts underlined that current monitoring and research have revealed that salt marsh management must take into account site specific circumstances, e.g. geomorphological conditions, sedimentation rate, coastal defence measures (artificial drainage, summer dikes, sedimentation fields) and exposition (erosion, flood protection). A mosaic of diverse grazing patterns successfully serves a variety of management aims.

Continued monitoring of salt marshes in the entire property is being carried in the TMAP about every six years out to record and evaluate long-term changes and assess management measures such as grazing in relation to others.

In conclusion, an universally valid optimum grazing level of salt marshes cannot be defined. Instead, management including grazing has been adapted to site specific conditions as an integral part of salt marsh management according to the targets of the Wadden Sea Plan.

Re. ii. Who develops the grazing plans?

The management of salt marshes for the nominated property is thus a combination of the national management systems and the trilateral Wadden Sea Plan and relevant EU legislation (Natura 2000) implemented by the responsible authorities.

In the Netherlands, the salt marshes are predominantly managed by private nature conservation societies and for a smaller part by private owners organized in the Landowners Association.

Within the framework of conservation objectives agreed upon for salt marshes, the managers of the salt marshes, in consultation with the parties involved, develop their management plans which also include the grazing plan sections.

In Niedersachsen, approximately 90% of the Niedersachsen salt marshes are owned by the state. According to §7 of the Act on the National Park "Niedersächsisches Wattenmeer", grazing plans are to be developed by the authority responsible for managing the state-owned areas (Domänenverwaltung Oldenburg und Stade) while paying due regard to the nature protection purpose in agreement with the National Park Authority, implementing foreland and salt marsh management measures in consultation with the responsible authority respectively association for coastal protection concerned.

In Hamburg, there are no special salt marsh management plans. Grazing is regulated by the law for the National Park Wadden Sea of Hamburg.

In Schleswig-Holstein, the State Agency for Coastal Defence, National Park and Marine Conservation (Landesbetrieb für Küstenschutz, Nationalpark und Meeresschutz Schleswig-Holstein, LKN) is in charge of salt marsh management and develops the grazing plan for the Schleswig-Holstein part of the property.

In Denmark, the relevant areas with grazing as a management option within the nominated area are situated on the salt marshes outside and along the dikes on the mainland and the areas on

the peninsula Skallingen and the northern part of Rømø. The areas on Rømø and Skallingen are owned by the Danish Ministry of Environment and managed by the Nature Agency. Management occurs according to the management plans for the two local offices Nature Agency Blaavandshuk and Nature Agency Vadehavet.

The salt marshes along the mainland are from the border to Germany up to Vester Vedsted predominantly owned and managed by The Danish AgriFish Agency under the Ministry of Food, Agriculture and Fisheries and from Vester Vedsted to Skallingen some of the salt marshes are also under private ownership. There are no specific grazing plans for these areas.

All areas are part of Natura 2000 designations and management options and needs are covered by the Natura 2000 plans issued by the Danish Ministry of Environment in 2011.

The Natura 2000 plans will be followed by Natura 2000 Action Plans for each site issued by the municipalities with suggestions for specific measures to combat the threats pointed out in the plans. The municipalities will be responsible for implementing these plans and for that they have a number of tools as laid out in the Nature Conservation Act.

Re. iii. Control and enforcement

The Netherlands

In the Netherlands, the provinces are in charge of control and enforcement. In the Nature Management Plans issued by the Provinces, and aligned to the national Natura 2000 and Water Framework Directive implementation requirements, specific management types are assigned to the different natural areas, like salt marshes. The owner of the area is obliged to manage the area in such a way that the conservation objective for the area is fulfilled. The owner may apply for subsidies for certain types of management, which implies an additional control. In addition, in the Province of Groningen, the parties involved in salt marsh management have signed a covenant to underline their shared responsibility and to declare their intention to contribute to take appropriate measures, including zonation of grazing, maximum numbers etc. to enhance a.o. the biodiversity of the salt marshes.

Germany

In Niedersachsen, according to § 7 of the National Park Act, the authority responsible for managing the state-owned areas (Domänenver-

waltung Oldenburg und Stade) regulates the management in consultation with the National Park Authority and in compliance with the protection purposes of the National Park Act. According to § 7 National Park Act Lower Saxon Wadden Sea, all lease agreements for state-owned land have to be concluded in agreement with the National Park Authority. The National Park also defines the framework of all land use from a nature conservation perspective such as grazing intensity, mowing and cessation of use.

In Hamburg, grazing (zonation, maximum numbers and seasonal regulations) is regulated by the law for the National Park Wadden Sea of Hamburg. The National Park Administration as part of the State Ministry for Urban Development and the Environment, Division for European Nature Conservation & National Park Wadden Sea of Hamburg (Behörde für Stadtentwicklung und Umwelt, Referat Europäischer Naturschutz und Nationalpark Hamburgisches Wattenmeer) is in charge to control these requirements.

In Schleswig-Holstein, the State Agency for Coastal Defence, National Park and Marine Conservation (Landesbetrieb für Küstenschutz, Nationalpark und Meeresschutz Schleswig-Holstein, LKN) is in charge of control and enforcement. All items regarding salt marsh management are discussed and planned in detail for each salt marsh area on a yearly basis before the vegetation period and before breeding birds settle.

Denmark

In Denmark, the major responsibility for enforcement lies within the jurisdiction of the municipalities. The municipalities are the key administrators of the Danish Nature Conservation Law and oversee that the provisions of the act are not violated.

Salt marshes in Denmark fall under the Danish Nature Conservation Law (2013) and the Wadden Sea Ministerial Order (2007). This legislation entails limitations to the use and management of the salt marshes. Neither new drainage works nor sedimentation fields with ditches and groyne are maintained any longer. The exception is along the low tide dam to the island of Mandø where these activities are carried out in order to secure the island passage.

In the framework of the elaboration of the Danish Wadden Sea Natura 2000 Management Plan, the following objectives and management measures for the future management of salt marshes have been formulated in line with the Wadden Sea Plan targets formulated above:

- The salt marshes have a favourable conservation status, which implies that:
- The area and the biological condition should be stabilized or increased;
- The natural drainage and hydrology are secured;
- Optimal (low-intensity) maintenance is secured;
- Their function as breeding- and roosting ground for birdlife is secured.

In cases where inappropriate management can compromise the conservation objectives, the municipalities as well as the Nature Agency and/or National Park can make voluntary agreements with landowners in order to introduce more appropriate management measures. The role of the Nature Agency and the National Park is as a facilitator for improved management and/or provider of economic compensation.

Annex 1: Revised Maps, Tables and Figures

Annex 1 Revised Maps, Tables and Figures (with reference to the nomination dossier)

Component Part	Name	Country	Coordinates of Centre Points	Size in hectares	Map No. 1:50,000
001	Key Planning Decision (PKB) Wadden Sea, part I	Netherlands	53° 23' 27" N 05° 39' 57" E	247,386	NL3/18 - NL18/18
002	Key Planning Decision (PKB) Wadden Sea, part II	Netherlands	53° 22' 00" N 06° 53' 47" E	790	NL1/18 - NL3/18
003	Key Planning Decision (PKB) Wadden Sea, part III / National Park Wadden Sea Niedersachsen, part I	Netherlands / Germany	53° 16' 31" N 07° 09' 49" E	8,931	NL1/18 D17/19
004	National Park Wadden Sea Niedersachsen, part II	Germany	53° 41' 44" N 07° 19' 57" E	199,026	D15/19 - D19/19
005	National Park Wadden Sea Niedersachsen, part III	Germany	53° 37' 40" N 08° 15' 50" E	49,134	D13/19 - D14/19
006	National Park Wadden Sea Niedersachsen, part IV / National Park Wadden Sea Hamburg	Germany	53° 53' 03" N 08° 22' 06" E	80,663	D11/19 - D13/19
007	National Park Wadden Sea Schleswig-Holstein / Danish Wadden Sea Nature and Wildlife Reserve, part I*	Germany / Denmark	54° 36' 31" N 08° 27' 59" E	537,536	D1/19 -D10/19
008	Danish Wadden Sea Nature and Wildlife Reserve, part II	Denmark	55° 29' 56" N 08° 11' 14" E	19,937	DK1/3 - DK3/3
Total Property				1,143,403	

Table S1 Rev.: Coordinates of the centre points of the component parts of the inscribed and nominated property. Component parts with the offshore extension of the Niedersachsen Wadden Sea and the nominated property in the Danish Wadden Sea are shaded in red (Volume One, page 7).

* The expected size of the merged area of the Danish - German component site *007 National Park Wadden Sea Schleswig-Holstein / Danish Wadden Sea Nature and Wildlife Reserve, part I* is 889 ha less, because of an overlap of the National Park Wadden Sea Schleswig-Holstein and Danish Wadden Sea Nature and Wildlife Reserve caused by an inconsistency of geographical data based upon an unclear definition of the border between Denmark and Germany.

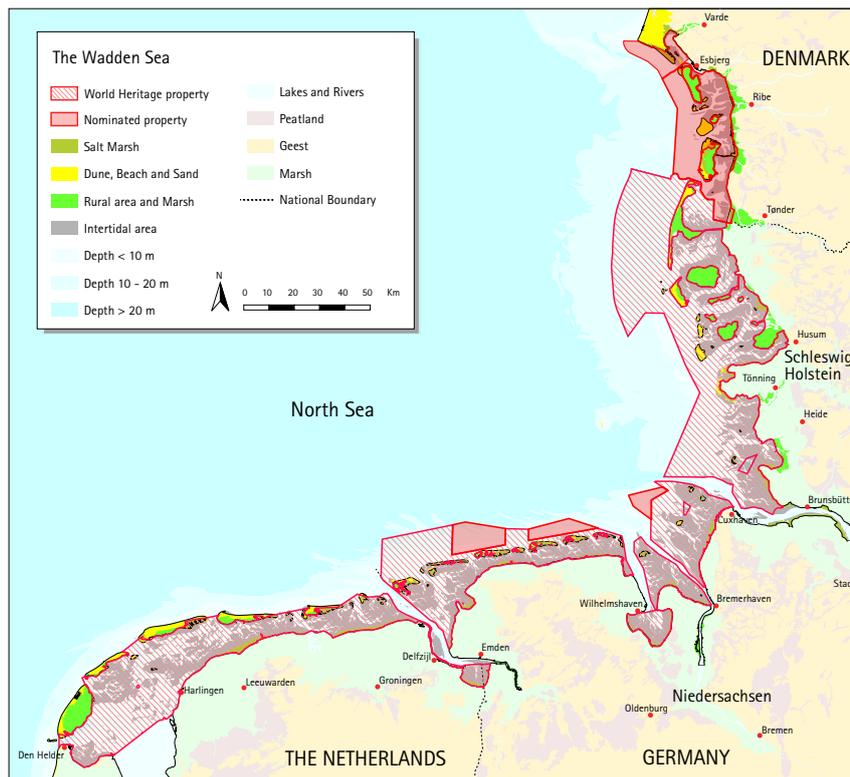


Figure S1 Rev.: Map of the World Heritage property and the nominated property (Volume One, page 8).

Table 1.1 Rev.:
Coordinates of the centre
points of the component
parts of the inscribed
and nominated property.
Component parts with the
offshore extension of the
Niedersachsen Wadden Sea
and the nominated prop-
erty in the Danish Wadden
Sea are shaded in red
(Volume One, page 13).

Component Part	Name	Country	Coordinates of Centre Points	Size in hectares	Map No. 1:50,000
001	Key Planning Decision (PKB) Wadden Sea, part I	Netherlands	53° 23' 27" N 05° 39' 57" E	247,386	NL3/18 - NL18/18
002	Key Planning Decision (PKB) Wadden Sea, part II	Netherlands	53° 22' 00" N 06° 53' 47" E	790	NL1/18 - NL3/18
003	Key Planning Decision (PKB) Wadden Sea, part III / National Park Wadden Sea Niedersachsen, part I	Netherlands / Germany	53° 16' 31" N 07° 09' 49" E	8,931	NL1/18 D17/19
004	National Park Wadden Sea Niedersachsen, part II	Germany	53° 41' 44" N 07° 19' 57" E	199,026	D15/19 - D19/19
005	National Park Wadden Sea Niedersachsen, part III	Germany	53° 37' 40" N 08° 15' 50" E	49,134	D13/19 - D14/19
006	National Park Wadden Sea Niedersachsen, part IV / National Park Wadden Sea Hamburg	Germany	53° 53' 03" N 08° 22' 06" E	80,663	D11/19 - D13/19
007	National Park Wadden Sea Schleswig-Holstein / Danish Wadden Sea Nature and Wildlife Reserve, part I*	Germany / Denmark	54° 36' 31" N 08° 27' 59" E	537,536	D1/19 - D10/19
008	Danish Wadden Sea Nature and Wildlife Reserve, part II	Denmark	55° 29' 56" N 08° 11' 14" E	19,937	DK1/3 - DK3/3
	Total Property			1,143,403	

* The expected size of the merged area of the Danish - German component site *007 National Park Wadden Sea Schleswig-Holstein / Danish Wadden Sea Nature and Wildlife Reserve, part I* is 889 ha less, because of an overlap of the National Park Wadden Sea Schleswig-Holstein and Danish Wadden Sea Nature and Wildlife Reserve caused by an inconsistency of geographical data based upon an unclear definition of the border between Denmark and Germany.

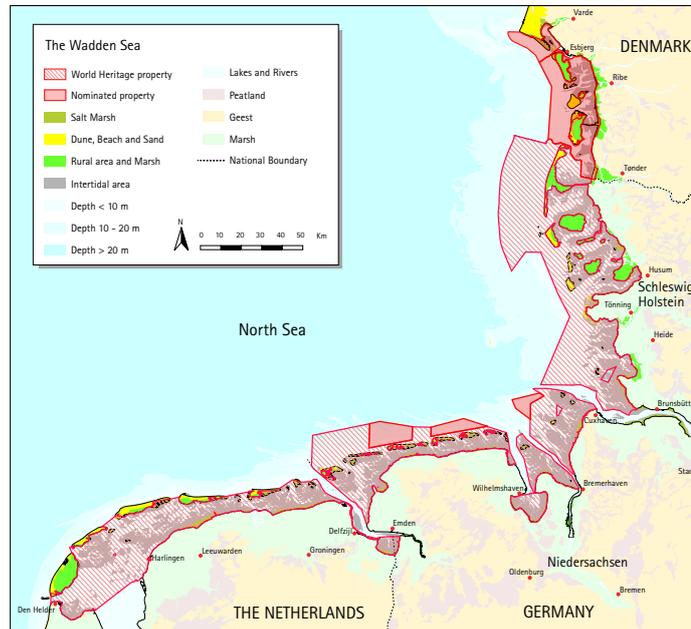


Figure 1.2 (right) Rev.: The Wadden Sea (A3 map on the following map) (Volume One, page 14).

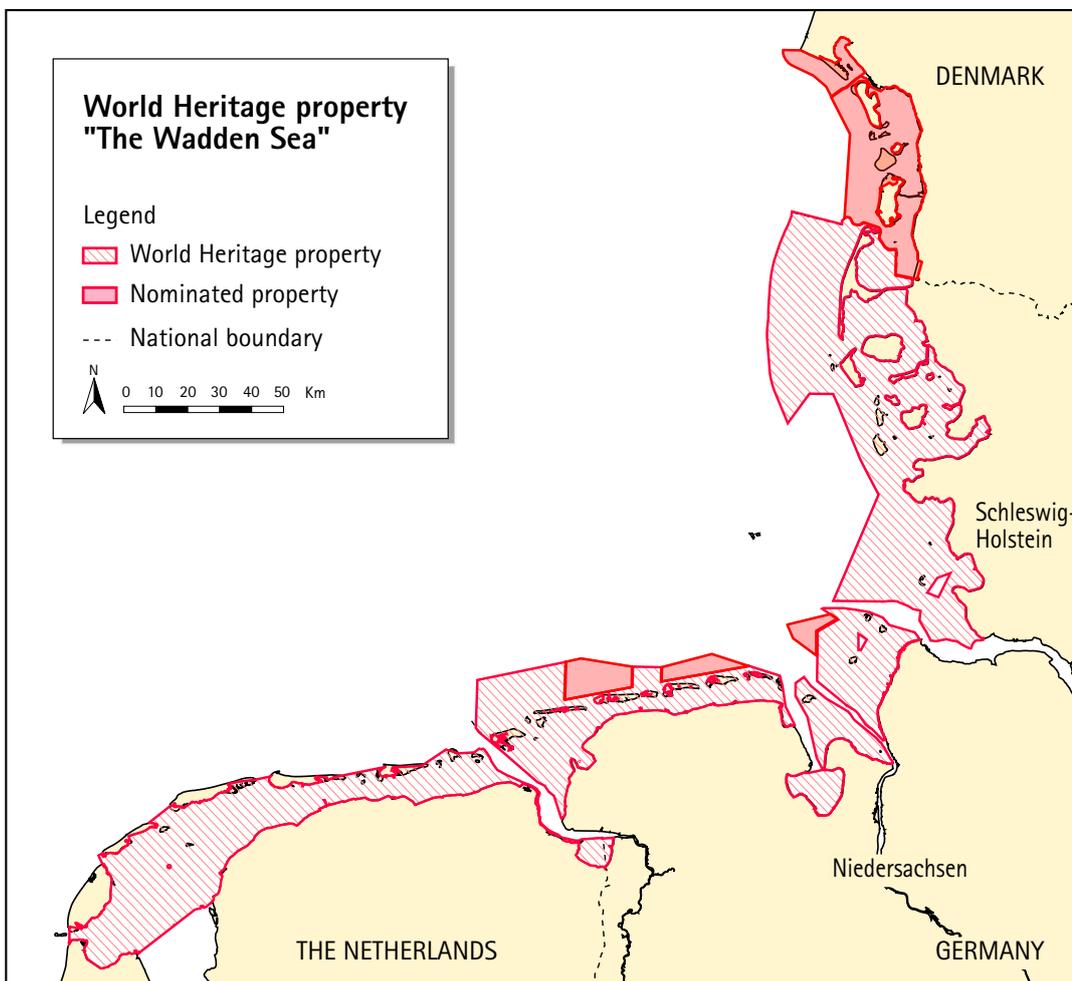
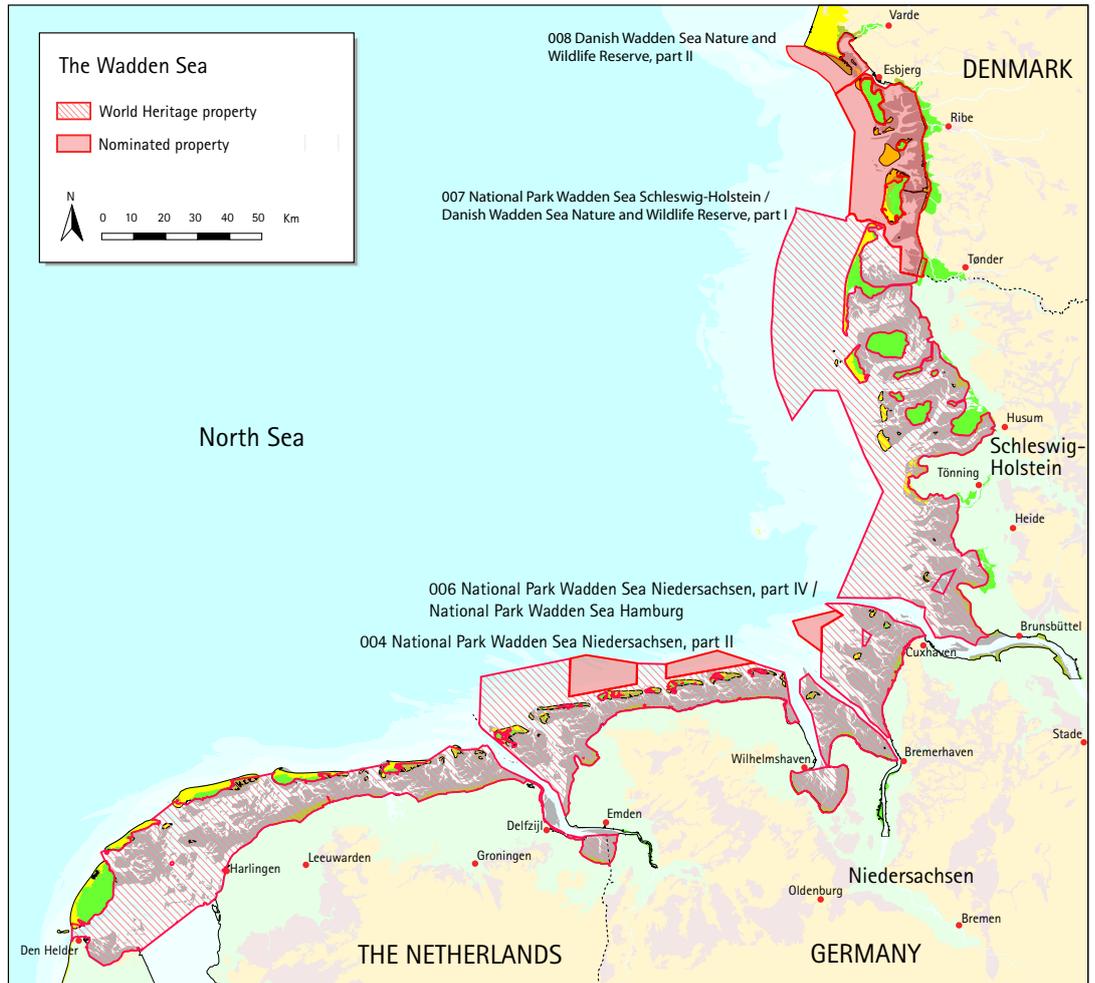


Figure 1.3 Rev.: The Wadden Sea World Heritage and the nominated property (Volume One, page 14).

Figure 1.4 Rev.:
The Wadden Sea World
Heritage and the nominated
property
(Volume One, page 15).



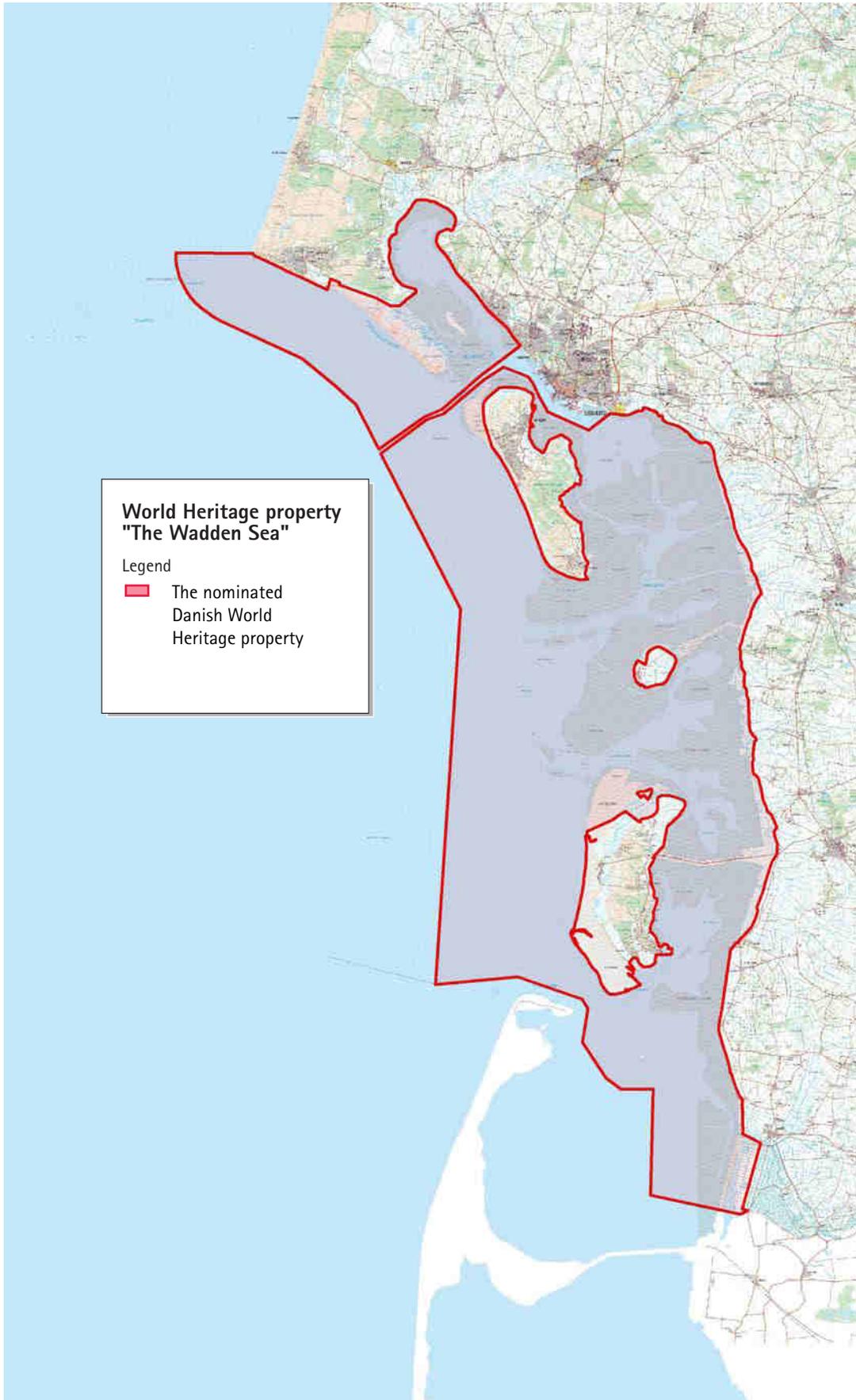


Figure 1.5 Rev.:
The nominated Danish
World Heritage property
(Volume One, page 16).

Table 1.3 Rev.:
Size and distribution of the inscribed and nominated property. Component parts with the offshore extension of the Niedersachsen Wadden Sea and the nominated property in the Danish Wadden Sea are shaded in red (Volume One, page 19).

Component Part	Name	Size in hectares	Size in km ²
001	Key Planning Decision (PKB) Wadden Sea, part I	247,386	2,473.9
002	Key Planning Decision (PKB) Wadden Sea, part II	779	7.9
003	Key Planning Decision (PKB) Wadden Sea, part III / National Park Wadden Sea Niedersachsen, part I	8,931	89.3
004	National Park Wadden Sea Niedersachsen, part II	199,026	1990.3
005	National Park Wadden Sea Niedersachsen, part III	49,134	491.3
006	National Park Wadden Sea Niedersachsen, part IV / National Park Wadden Sea Hamburg	80,663	806.6
007	National Park Wadden Sea Schleswig-Holstein / Danish Wadden Sea Nature and Wildlife Reserve, part I	537,536	5375.4
008	Danish Wadden Sea Nature and Wildlife Reserve, part II	19,937	199.4
	Total Property	1,143,403	11434,1

Table 5.1 Rev.:
Overview of land ownership of the inscribed and nominated property. Component parts with the offshore extension of the Niedersachsen Wadden Sea and the nominated property in the Danish Wadden Sea are shaded in red (Volume One, page 128).

Area	ha	km ²	Ownership
Key Planning Decision Area (PKB) Wadden Sea	255,031	2,550.3	93.8 % state owned 1.7 % "Groninger Landschap" 0.05 % "Noord-Hollands Landschap" 4.2 % "Natuurmonumenten" 0.3 % "Wetterskip Fryslan"
Wadden Sea National Park Niedersachsen	324,160	3241.6	93.5% federally owned 5.2% state owned 0.9% owned by municipalities 0.4% private property
Wadden Sea National Park Hamburg	13,611	136.1	97.8% federally owned 2% owned by the City of Hamburg 0.2% private property
Wadden Sea National Park Schleswig-Holstein	436,698	4,367.0	98.3% federally owned 1.6% state owned 0.1% private property
Danish Nature and Wildlife Reserve	121,663	1216.6	99.0% state owned 0.1% owned by municipalities 0.9% private property
TOTAL PROPERTY	1,151,163	11,511.6	

* The total size of the land ownership is calculated on basis of national conservation areas and differs from the total size of the 8 component parts. Reasons are overlaps or gaps between the national conservation areas caused by inconsistency of geographical data based upon the unclear definition of the borders between the Netherlands, Niedersachsen, Schleswig-Holstein and Denmark. The inconsistencies in size are neutralized by joint component parts shared by states and countries.

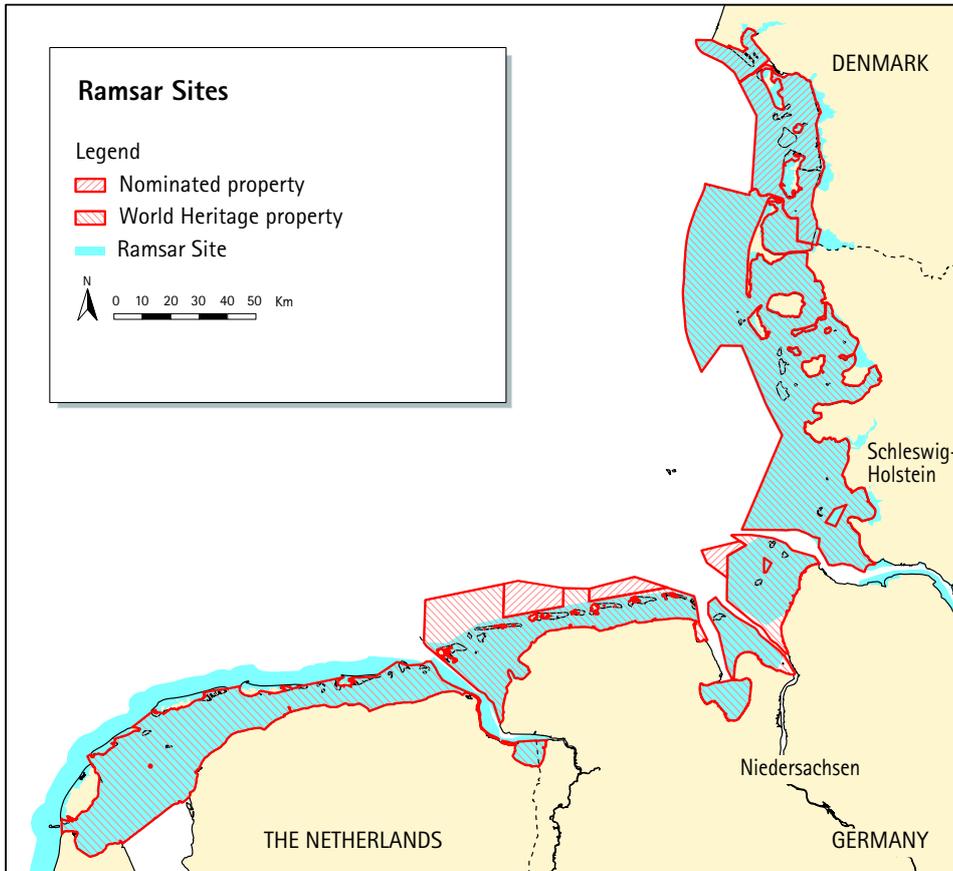


Figure 5.1 Rev.: Map of Ramsar sites within and adjacent to the inscribed and nominated property (Volume One, page 132).

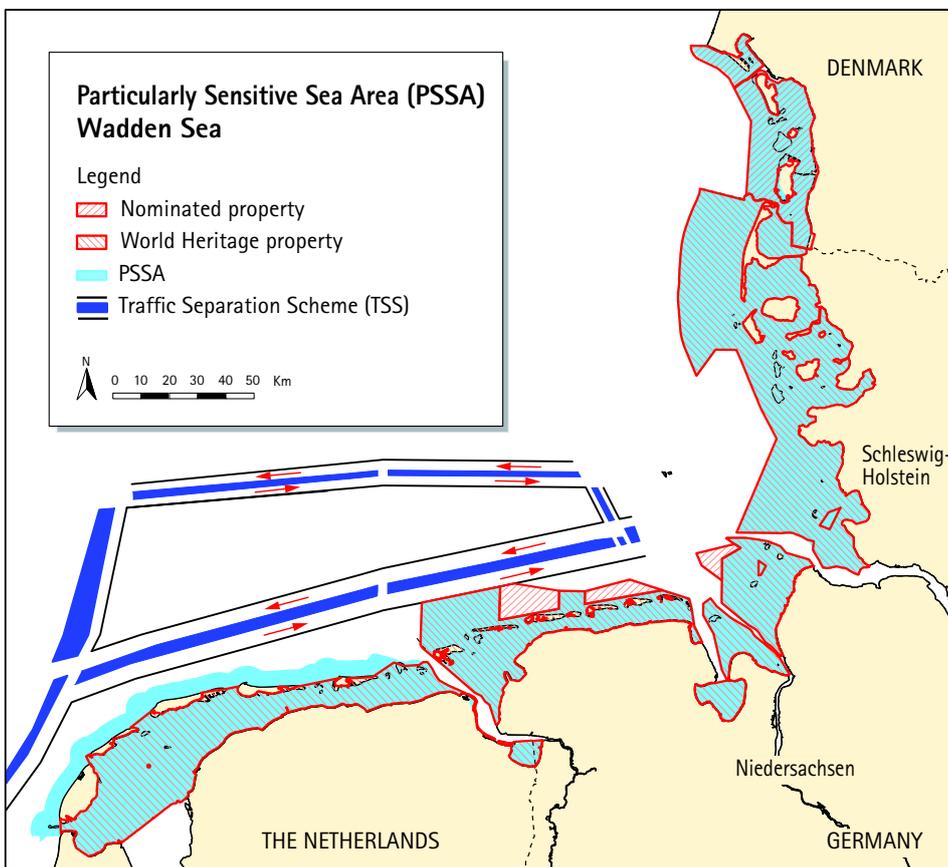


Figure 5.2 Rev.: Map of the Particularly Sensitive Sea Area (PSSA) Wadden Sea and the Traffic Separation Scheme (TSS) (Volume One, page 133).

Figure 5.3 Rev.: Map of the Special Protection Areas (SPAs) within and adjacent to the inscribed and nominated property (Volume One, page 134).

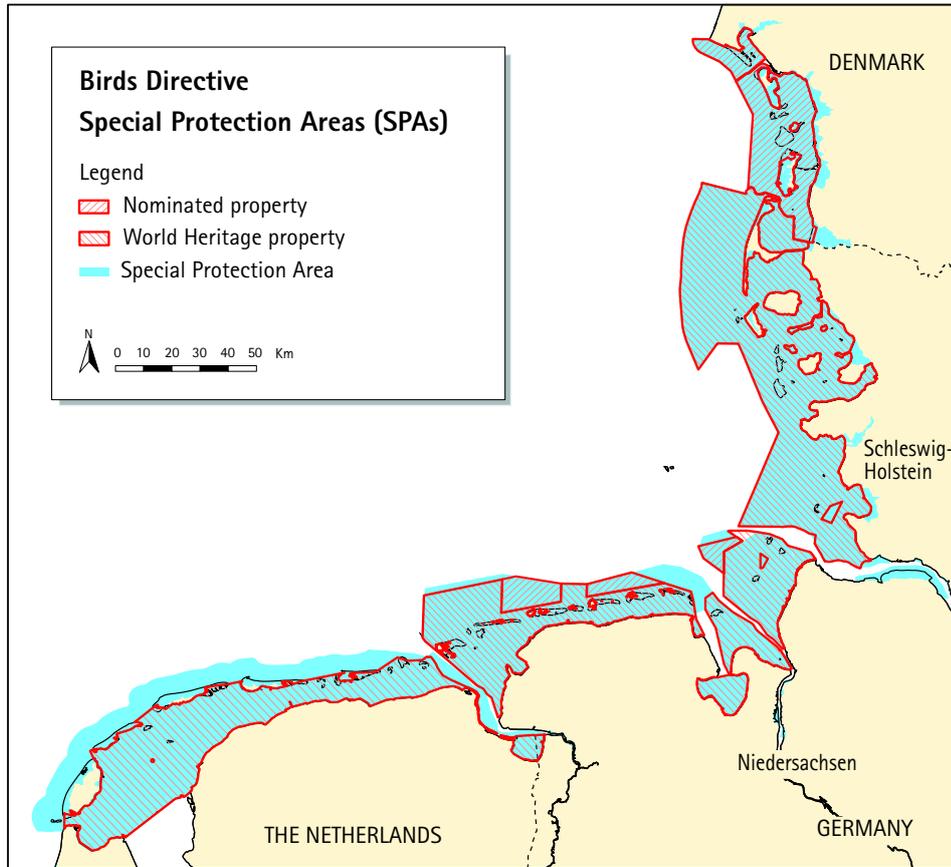
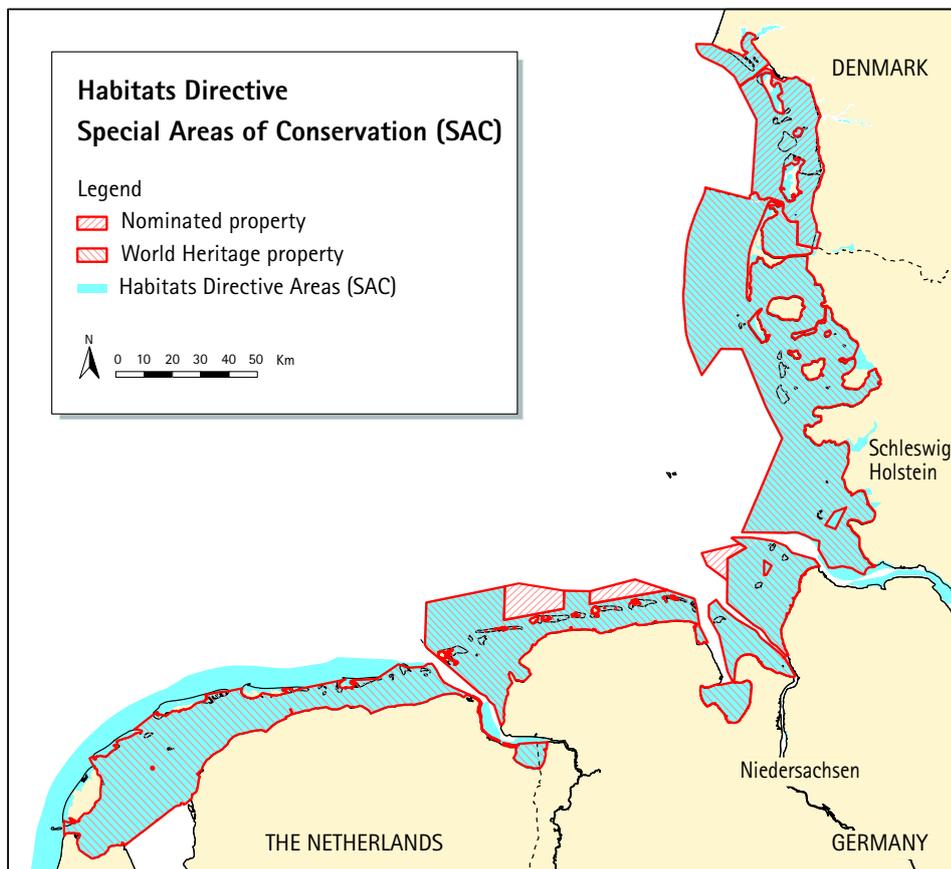


Figure 5.4 Rev.: Map of the Special Areas of Conservation (SAC) within and adjacent to the inscribed and nominated property (Volume One, page 135).



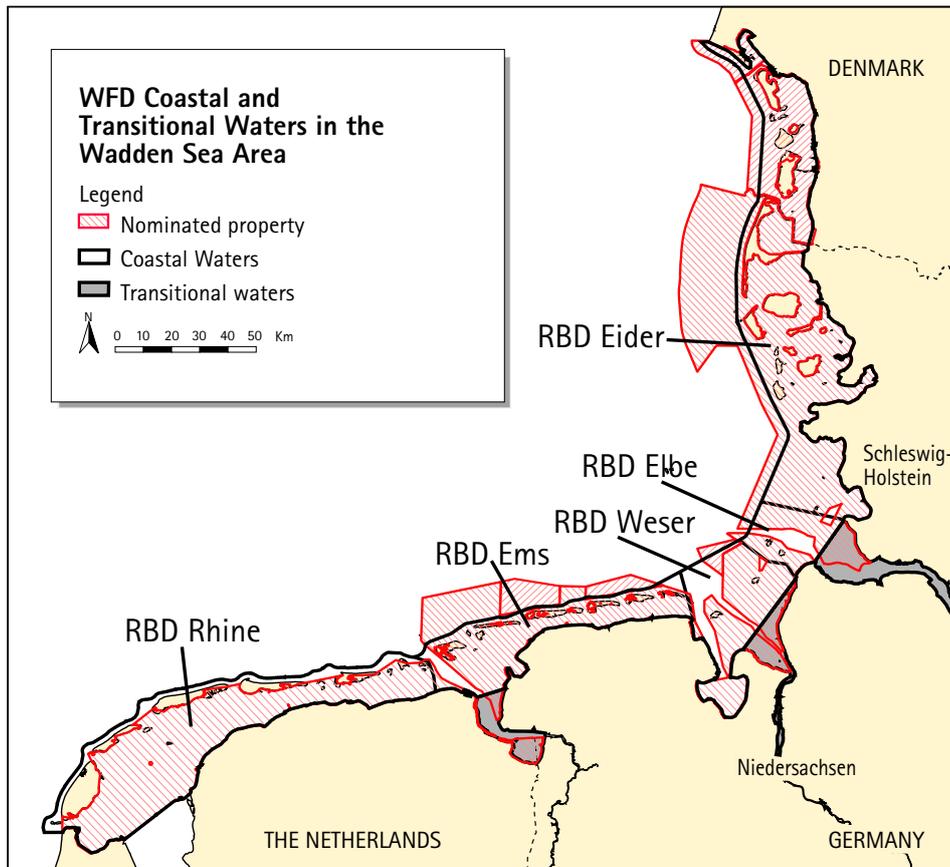


Figure 5.5 Rev: Map of the Water Framework Directive Coastal and Transitional Waters within and adjacent to the inscribed and nominated property (Volume One, page 136).

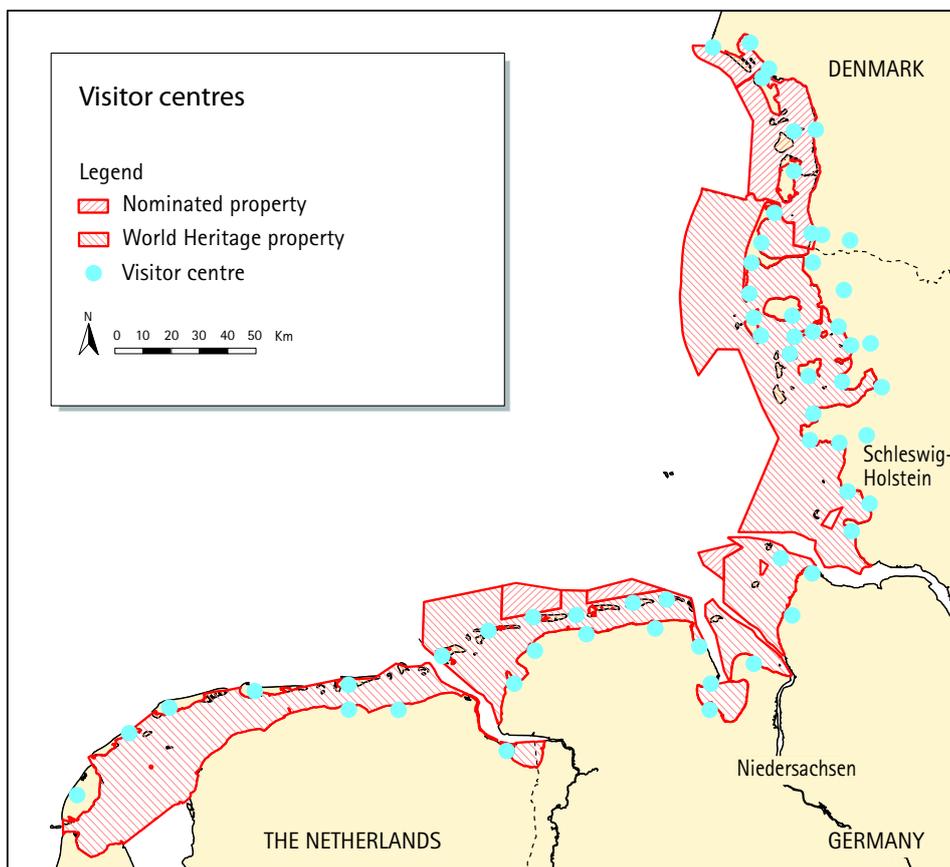


Figure 5.7 Rev: Map of visitor centres within and adjacent to the inscribed and nominated property (Volume One, page 150).

Annex 2: Copies of Relevant Reports

Attachment 1

BSH 2009: Maritime Spatial Plan EEZ; Summary Environmental Report http://www.bsh.de/en/Marine_uses/Spatial_Planning_in_the_German_EEZ/documents2/Report-NorthSea.pdf

Attachment 2

Staatliches Gewerbeaufsichtsamt Oldenburg 2007: Offshore Windpark Nordergründe - Vorbescheid nach §9 Bundesimmissionsschutzgesetz (BImSchG) vom 15.11.2007.

Attachment 3

Petersen, I.K., Christensen, T.K., Kahlert, J., Desholm, M. & Fox, A.D. 2006: Final results of bird studies at the offshore wind farms at Nysted and Horns Rev, Denmark. http://www.vattenfall.dk/da/file/69662-Horns-Rev--Nysted-birds_7842547.pdf (DVD, extra supplement II)

The Wadden Sea

 World Heritage property	 Lakes and Rivers
 Nominated property	 Peatland
 Salt Marsh	 Geest
 Dune, Beach and Sand	 Marsh
 Rural area and Marsh	 National Boundary
 Intertidal area	
 Depth < 10 m	
 Depth 10 - 20 m	
 Depth > 20 m	

