

**EUROPE / NORTH AMERICA**

**WADDEN SEA**

**(Extension of the “Wadden Sea”, Germany / Netherlands)**

**DENMARK / GERMANY**



# WORLD HERITAGE NOMINATION – IUCN TECHNICAL EVALUATION

## WADDEN SEA (DENMARK / GERMANY) – ID No. 1314 Ter

**IUCN RECOMMENDATION TO WORLD HERITAGE COMMITTEE:** To approve the extension under natural criteria.

**Key paragraphs of Operational Guidelines:**

Paragraph 77: Nominated property meets World Heritage criteria.

Paragraph 78: Nominated property meets integrity or protection and management requirements.

**Background note:** In 1988 Germany nominated the mudflats of the Wadden Sea in Lower Saxony for World Heritage inscription. The Committee, at its 13th Session (Paris, 1989), recommended that the nomination of this property be deferred until a fully revised nomination of the Wadden Sea was submitted jointly by Denmark, Germany and the Netherlands.

In 2008 Germany and the Netherlands resubmitted a joint nomination and the Committee, at its 33rd Session (Seville, 2009), inscribed the Wadden Sea (Germany/Netherlands), on the World Heritage List under natural criteria (viii), (ix) and (x) (decision 33 COM 8B.4), covering an area of 968,393 ha. In 2010 Germany and the Netherlands submitted a Minor Boundary Modification to include the Hamburg Wadden Sea National Park (13,611 ha) which was approved by the Committee at its 35th Session (Paris, 2011, decision 35COM 8B.47). Thus the property now covers an area of 982,004 ha.

The Committee, at its 33rd Session (Seville, 2009) and at its 35th Session (Paris, 2011) encouraged the States Parties of Germany and the Netherlands to work with the State Party of Denmark and consider the potential for nominating an extension of the property to include the Danish Wadden Sea. A range of additional recommendations were also made regarding the property, and the relevant decisions are 33 COM 8B.4 and 35COM 8B.47.

In response to the World Heritage Committee's recommendations, the State Parties of Germany, the Netherlands and Denmark submitted in January 2013 a nomination to extend the Wadden Sea World Heritage property (968,393ha), to include most of the Danish Wadden Sea Conservation Area, and a further area offshore of the German Wadden Sea in Lower Saxony.

### 1. DOCUMENTATION

**a) Date nomination received by IUCN:** 20 March 2013

**b) Additional information officially requested from and provided by the State Party:** Following the technical evaluation mission the State Party was requested to provide supplementary information on 13 December 2013. The information was received on 26 February 2014.

**c) Additional literature consulted:** Christensen, S. M. (2008). **Case study 5 - Wadden Sea National Park Pilot, Denmark.** Scottish Natural Heritage Research, Annex to Commissioned Report No. 271. Christensen, S. M. (2008). **Case study 4 - Wadden Sea National Park - Schleswig- Holstein Area,** Germany. Scottish Natural Heritage Research, Annex to Commissioned Report No. 271. Dettmann, C., and Enemark, J. (2009). **The Wadden Sea wetlands: A multi-jurisdictional challenge.** In *Sustaining the world's wetlands*, ed. R.C. Smardon, 21–56. Springer Science, New York. Ens, B. J., Blew, J., van Roomen, M.W.J., and Turnhout van, C.A.M. (2009). **Exploring contrasting trends of migratory waterbirds in the Wadden Sea.** Wadden Sea Ecosystem No. 27. Common Wadden Sea Secretariat, Trilateral Monitoring and Assessment Group, Joint Monitoring Group of Migratory Birds in the

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**d) Consultations:** 7 desk reviews received. The mission also met with representatives from the Nature Agency, Denmark; from the Common Wadden Sea Secretariat, Germany; from the Coastal Authority in Denmark; from the Nature Centre; from the Common Wadden Sea Office; the Federal Ministry and several State Ministries of Germany; from the National Park Niedersachsenthe; from the Wadden Sea Visitor Centre; the Ministry of

Economic Affairs, Agriculture and Innovation; the Ministry of Economic Affairs, Agriculture, and Innovation, Regional Policy Department North; Mayors of the Tønder, Esbjerg, and Fanø Municipalities; Ornithological Society; Hunters Association; Agricultural Society; Military Commander; and many other stakeholders.

**e) Field Visit:** Dr Wendy Strahm and Dr Oliver Avramoski, 19-23 August 2013

**f) Date of IUCN approval of this report:** March 2014

## 2. SUMMARY OF NATURAL VALUES

The Wadden Sea, which covers the intertidal zone in the south-eastern part of the North Sea, is considered to represent the largest unbroken system of tidal sand and mud flats worldwide with natural dynamic processes proceeding in a widely unimpaired natural state. The proposed extension encompasses and complements all the biophysical and ecosystem processes that characterise the Wadden Sea. It includes most of the Danish Wadden Sea Conservation Area (DWSCA; 121,616 ha) at the most northern part of the Wadden Sea, and an offshore extension of the Lower Saxony Wadden Sea National Park, Germany (WSNPLS; 40,628 ha). The location and size of both the inscribed and nominated component parts of the property were provided in the nomination dossier (table 1). The total area of the property if the proposed extension is approved will amount to 1,143,403 ha. No buffer zone to the nominated property is proposed.

The DWSCA was designated by Statutory Order on the Nature and Wildlife Reserve Wadden Sea, 1982 and its later amendments. The boundaries of this area are mostly delimited by man-made dikes along the mainland coast and surrounding the three inhabited islands of Rømø, Mandø and Fanø, with one small area inland of the dikes included (most of the artificially managed wetland of Margrethe Kog which was reclaimed in 1982). In the few areas that are not diked, the area is delimited by the highest daily water level including the high sands. Offshore the nominated property is delimited by the 3 nautical sea mile boundary. The state boundary between Denmark and Germany constitutes the southern boundary of the proposed extension. In the north, the proposed extension includes the peninsula of Skallingen and the Ho Bay. Some of the state-owned parts of the islands such as the beaches of Rømø are included in the nomination. The proposed extension does not include the shipping lane to Esbjerg, the military exercise area on the island of Rømø, a small area around the Rømø harbour (as there are plans to enlarge the harbour) and a small area in the northern part of the Margrethe Kog reclamation area.

The proposed extension in Denmark includes all habitats which characterize the Wadden Sea – salt marshes, tidal areas including the tidal inlets, channels and gullies, beaches and offshore areas and processes that

exemplify a natural and dynamic tidal flat system. With the exception of some zones of strict protection (such as the main haul-out sites for harbour seals and high water roosts and breeding sites for birds), the existing protection regime for the DWSCA allows access and various extractive and non-extractive human use of the area provided that there are no adverse effects to its natural values. The Danish extension of the property is mainly classified as IUCN Category V, although certain sensitive areas benefit from a more restrictive protection regime.

The proposed new extension of the property in Germany covers the offshore area off the East Frisian Islands and the Elbe-Weser triangle, which coincides with the 2010 extension of the WSNPLS. This area is an important addition to increase the integrity of the existing World Heritage property. The main shipping lane of the Jade-Weser approach, the Traffic Separation Scheme (TSS) and an area of commercial sand extraction on the northern edge of the Elbe-Weser triangle have been excluded from the nominated property. It is entirely owned by the state.

### 3. COMPARISONS WITH OTHER AREAS

The natural values that are present in the proposed extension reaffirm the existing justifications for the property under criteria (viii), (ix) and (x), and the IUCN evaluation from the time of the first inscription of the property provides a comparative analysis which is not repeated here.

The proposed extension includes a number of natural areas that are dynamically and functionally linked to the inscribed property. The proposed extension also strengthens the importance of the inscribed property for the conservation of the flora and fauna of the Wadden Sea as for the inscribed World Heritage property. It also plays a key role for the survival of migratory birds.

A number of attributes particular to the Danish Wadden Sea complement and enhance the elements and processes necessary to express the outstanding universal value of the existing property.

The Danish Wadden Sea constitutes the Northern Wadden Sea region, one of the three major subdivisions based on physical attributes. The Danish extension at the northern rim of the Wadden Sea constitutes the symmetric counterpart to the western Dutch Wadden Sea in the south. It is worth noting, however, that the Danish Wadden Sea receives more sand from the North Sea than most other parts. This may have given rise to a particularly high share of sand bars and plains remaining dry at normal high tide. Furthermore, the Danish Wadden Sea contains fine examples of post-glacial coastal geomorphology. At two areas moraines of a former Ice Age approach the tidal area directly by forming active cliffs. Moraines stemming from glaciation periods are more prominent than in the existing property.

Most salt marshes in the Danish Wadden Sea exhibit a much shorter history of human interference than those in the existing property. Also, the share of unmodified natural shoreline in the Danish Wadden Sea is comparatively higher than in other regions of the existing world heritage property. Most mainland salt marshes in the existing property are man-made and have developed by being protected by brushwood groynes. As a result, their morphology differs to that in natural salt marshes. The area between the Varde River estuary and the peninsula of Skallingen in the far north Ho Bay present important exceptions. The salt marsh at the lee side of Skallingen has developed naturally and demonstrates various transition stages of natural succession. The salt marshes along the shores of Ho Bay have also developed naturally over an area of 10 km<sup>2</sup>. Furthermore, the Varde River entering the Ho Bay basin forms the only estuary in the Wadden Sea not flanked by dikes nor intersected by barriers. The marsh on either side of Varde River is under agricultural use, and only a small margin at the mouth is composed of natural brackish and salt marsh vegetation. Nonetheless, this estuary is a showcase of estuarine development and represents a habitat variety which has been lost or strongly transformed elsewhere in the Wadden Sea. As such it is of exemplary value for the Wadden Sea as a whole.

The offshore extension of the Lower Saxony Wadden Sea National Park (Germany) complements important geomorphological and hydrological elements in the existing property. The proposed extension of the offshore belt in Lower Saxony is part of a complex and highly dynamic eastward sand transport system and sediment-sharing system between offshore belt, barrier islands, estuaries and tidal areas. The offshore belt is also an important spawning site for fish and invertebrate species, as well as for the protection of sea birds and marine mammals, in particular harbour porpoise. The German offshore extension will therefore enhance and strengthen the values, connectivity, completeness and integrity of the existing property.

Given that this nomination is an extension of an existing property, the addition of both the Danish Wadden Sea (which encompasses almost all of the DWSCA) and the German extension (which includes an additional offshore part of the Lower Saxony Wadden Sea National Park) will include elements and processes that complement and strengthen the Outstanding Universal Value of the existing property.

## 4. INTEGRITY, PROTECTION AND MANAGEMENT

### 4.1. Protection

The proposed extension has adequate long-term legislative, regulatory, formal institutional protection and management in place to ensure that the values and the integrity are maintained. The German extension is part of the Wadden Sea National Park of Lower Saxony and

is designated as a core zone 1, which is the highest protection zone of the National Park. The Danish Wadden Sea is subject to comprehensive protection within the framework of the Statutory Order of the Nature and Wildlife Reserve Wadden Sea established in 1979 and 1982, merged into one Statutory Order in 1992, and amended in 2007. The Danish part of the proposed extension is also part of the Danish National Park Wadden Sea, created in 2010.

Both the German and Danish extensions are fully embedded within the overall trilateral protection and management scheme in the context of the Joint Declaration on the Protection of the Wadden Sea (2010) and the Wadden Sea Plan (2010). The nominated property is subject to protection under the European Union environment legislation, including the Birds Directive, Habitats Directive, Water Framework Directive and Marine Strategy Framework Directive, and is also subject to international protection regimes. It has been designated as a Particularly Sensitive Sea Area by the International Maritime Organisation and the Danish extension is a designated Ramsar site. The nominated property is also included in the African-Eurasian Waterbird Agreement, the Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas, and the Seal Agreement under the Bonn Convention.

The extension of the property in Germany is fully owned by the Federal Government. The Danish Wadden Sea is almost entirely state-owned (99%) with adjacent municipalities owning 0.1% and private ownership of 0.9% of the extension.

IUCN considers the protection status of the property meets the requirements of the Operational Guidelines.

## 4.2 Boundaries

The proposed extension of the property comprises all processes and features, including all the habitat types that are typical of the natural processes and dynamic occurring in the Wadden Sea. Upon inscription of the proposed extension, the integrity of the existing property will be enhanced and strengthened significantly. This nomination is therefore in accordance with the decisions of the Committee adopted at its 33rd Session (Seville, 2009) and at the 35th Session (Paris, 2011).

Two issues need to be raised concerning boundaries in the Danish part of the nomination. First, the nominated property follows for the most part the same boundaries as that of the DWSCA (there are exclusions of around 1,000 ha of the DWSCA, including 266 ha at Margrethe Kog, a small area near Rømø Harbour and the shipping lane to Esbjerg). Second, just one area on the inland part of the dike at Margrethe Kog, has been included in the nomination. The reason being that, although it is actively managed, this locality is of great importance as a high-water roosting site for birds.

The management zonation scheme for the Danish extension means that access and hunting is strictly prohibited in some 10% of the proposed extension, but regulated hunting in limited areas will still occur if the property is designated as World Heritage. Motorized transport and any transport propelled by wind power (kite surf, beach buggies) is prohibited except in specifically defined areas (some of which occur in the nominated part of the property); this has a strong visual impact and requires attention and specific management provisions.

The management zonation for the German extension prohibits “all activities which destroy, damage or change the National Park”. However, as a compromise with local stakeholders, shrimp fishing is permitted in this zone, although under restricted conditions and regulations.

With respect to connectivity, there is no problem between the geomorphological, hydrological and ecological connectivity of the open North Sea with the shallow tidal area. On the other hand the Quality Status Report annexed to the nomination (Marencic, 2009) notes that there is a “loss of connectivity between the mainland, especially its rivers, and the Wadden Sea, following the closure and damming of many of the estuaries in the area” which affects species requiring brackish conditions. To mitigate the effect of poor connectivity, actions to restore transition zones between marine and freshwater environments have been proposed, in particular with respect to migrating species such as the houting (*Coregonus oxyrinchus*), a fish species found only in the Danish part of the WSCA.

IUCN considers the boundaries of the nominated property meet the requirements of the Operational Guidelines.

## 4.3 Management

In Germany it is acknowledged that enforcement measures are limited given the size of the nominated property and its limited accessibility. In order to address this situation the National Park of Lower Saxony is developing voluntary agreements with national park partners, aided by wardens employed by coastal protection authorities, volunteers from various NGOs, and the Water Police (the Park itself has no special ranger service). The counties and municipalities also share responsibility for enforcing and largely depend on other authorities for the enforcement of the regulations in the different management zones of the park. Only shipping regulations are controlled by the Federal Ministry of Transport as the marine area is a federal waterway.

The Danish 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 is therefore the key legal institution which is responsible for the nominated property. This agency has adequate administrative and technical capacity, including a ranger service. The Nature Agency also manages state-owned land in the vicinity of the property, including Natura 2000 sites, although responsibility for the protection of Natura 2000 sites on municipal land is assigned to the local government. The Danish Wadden Sea National Park authority has limited human and technical resources (being created in 2010 and having 5 full-time staff) and delegates policing of the property to the Nature Agency. Management activities and enforcement is supported by a National Park Partners Programme which currently counts 81 partners.

The wider protection of the proposed extension of the property in Germany, outside its boundaries, has been significantly improved through the establishment of the Natura 2000 network and the development of Integrated Coastal Zone Management (ICZM). ICZM is nested in the state planning system, including spatial planning, with responsibilities delegated at all levels of government: state, regional and local.

The recent Danish National Park Plan Wadden Sea 2013-2018 covers the adjacent inland areas beyond the proposed extension's boundary and is expected to play an important role in the integrated planning of the Danish Wadden Sea region. Additional protection in the areas around the property is provided through the management of Natura 2000 sites and also through the implementation of state and local spatial land-use plans. The Danish Spatial Planning Act stipulates that the country's coastal areas are to be kept as free as possible of development and installations that do not need to be located near the coast.

Based on the "Joint Declaration on the Protection of the Wadden Sea" developed in 1982 and updated in 2010, the governments of Netherlands, Germany and Denmark have developed a model system for transboundary management of the WSNCA which fully incorporates the existing World Heritage property and the proposed extension. This system adequately covers all elements of the management planning cycle: (i) development of a management plan (the Trilateral Wadden Sea Plan); (ii) implementation of measures in the management plan; and (iii) monitoring the effectiveness of the management plan (the Wadden Sea Quality Status Report).

The Trilateral Wadden Sea Plan (WSP) represents an adequate management system. It is set out to "serve as the overall management plan to ensure the coordinated management of the Property" for the Wadden Sea World Heritage property. Whilst WSP is a legally non-binding document, its implementation is supported by common political interest and commitment. The implementation of the plan is the responsibility of the three countries in cooperation, and individually, by the competent authorities on the basis of existing legislation and through the participation of interest groups. For example

the Lower Saxony Wadden Sea National Park does not have its own integrated management plan as it has adopted the WSP. The Park has developed management plans for specific issues, such as the Mussel Fishery Management Plan. However it appears that there is no formal mechanism to coordinate the development of similar specific plans in other parts of the property, such as the Wadden Sea National Park of Schleswig-Holstein. Thus there is clear potential to strengthen the specific rolling plans of action needed to implement the overall strategic framework established for the property.

Whilst the Danish National Park Plan Wadden Sea 2013-2018 does not make specific reference to the WSP targets, the objectives of this plan are fully aligned with the WSP targets as the National Park also takes part in the Trilateral Wadden Sea Cooperation. The specific conservation and management activities taking place in the National Park are implemented through the "Danish Statutory Order on Nature Conservation and a Nature Reserve in the Wadden Sea". Whenever necessary, the zoning and the management regulations can be modified by amending the Statutory Order.

The protection of the proposed extension as well as the property from wider threats outside of its boundaries is secured through the transposition of the relevant European Union environment legislation, such as the Birds Directive, Habitats Directive, Water Framework Directive and Marine Strategy Framework Directive.

In relation to financial support for effective management, the nomination dossier listed sources and level of funding in 2012 for the proposed extension. The stated budget in Denmark is 2,500,000€ (which includes funding of the Nature Agency, Municipal Wadden Sea Secretariat, National Park, Coastal Authority and AgriFish Agency), and for the Lower Saxony National Park 3,800,000€ was listed (which includes €1,000,000 for maintenance of 14 Information Centres plus wardens, and also includes NGO funding). These figures do not include important additional budgets for scientific research or specific EU-funded projects. It would appear that this level of funding will be maintained in the long term and, while there are always new demands for funding to enhance management activities, the property is much better funded than many others comparable properties in Europe.

The current annual budget for the Danish Wadden Sea National Park is €1,000,000 and currently its personnel include five permanent staff and some temporary workers. As noted above management activities and enforcement is supported by a National Park Partners Programme which currently counts 81 partners.

The Lower Saxony Wadden Sea National Park receives about €1,000,000 annually for its conservation and management. This funding is provided by a foundation created by the State with two oil companies (Statoil and Ruhrgas).

IUCN considers that the management of the nominated property meets the requirements of the Operational Guidelines.

#### 4.4 Community

The Trilateral Wadden Sea Cooperation provides the overall framework and structure for integrated conservation and management of the property as a whole, even if in each component part of the governance and management is the responsibility of a designated national authority. In Denmark the management authority is the Nature Agency of the Ministry of Environment. In Germany the management authority is the National Park of Lower Saxony.

TWSC also provides a framework for stakeholders' involvement through advisory boards and stakeholder forums. The Wadden Sea Advisory Board (WSAB) is governed by the municipalities and all relevant government and stakeholders. Since the creation of the Danish Wadden Sea National Park, a specific Advisory Board for the National park was created, with a similar composition to the WSAB. The National Park of Lower Saxony also includes an Advisory Board. These boards provide a forum for conflict management and input into management decisions.

Traditional uses of the proposed extension include livestock grazing in salt marshes, fishing of brown shrimp and flatfish using beam-trawling vessels. Traditional hunting of waterfowl, although at a very limited scale, is still allowed in the Danish extension. The Management Principles of the Trilateral Wadden Sea Plan include the principle that "unreasonable impairments of the interests of the local population and its traditional uses in the Wadden Sea Area have to be avoided". In the German part of the extension, small-scale traditional uses by local inhabitants, and in accordance with regional customs and traditions, are allowed. These activities are subject to licensing and environmental assessments in accordance with the Habitats Directive and the Wadden Sea Plan.

Other mechanisms for stakeholder involvement and public participation in the management of the property include mandatory consultation procedures concerning management plans and other strategic documents and participation in the Trilateral Governmental Conference on the Protection of the Wadden Sea (triennial) and the International Scientific Wadden Sea Symposium (triennial).

#### 4.5 Threats

The key existing and potential threats in the proposed extension include (i) invasive alien species; (ii) industrial facilities for energy production (including harbours, dredging, wind farms and submarine cables running through the property, increased air traffic servicing offshore platforms); (iii) maritime traffic; (iv) pollution from land-based sources; (v) limited ecological

connectivity due to coastal flood defense and protection; (vi) residential and tourism development; (vii) resource use (grazing, fishing and hunting); (viii) natural disasters (e.g. floods); and (ix) climate change.

Management responses are in place to deal with these threats although several deserve increased attention due to recorded declines in some of the natural values of the property. For example, monitoring of 34 species of breeding and migratory birds over the past 20 years have shown decreasing trends for 14 species (although increasing trends for 8 species). While the reasons for these trends are not known, it is suspected that the declines may be related to depleted food stocks (especially shellfish); human recreation disturbance; salt marsh, dune and beach management; increased predation; and possibly climate change. Thus whilst some issues are within the control of site managers, others are not. The need to balance the interests of the many stakeholders limits the options to deal with some threats, despite the high level of capacity and willingness by local and national authorities.

The number and density of wind farms outside of the property are impressive and on the increase. However the Wadden Sea Plan (2010) decrees that the construction of wind turbines in the Nature Conservation Area (an area near identical to the proposed extended property as a whole) is prohibited. Furthermore the Wadden Sea Plan decrees that the 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; and, in the case of cable corridors, they should be concentrated as to minimize cable crossings through the Wadden Sea, thus ensuring a minimum of cable corridors and a minimum of cables, using the best available techniques and avoiding salt marshes.

Whilst concern have been noted in Denmark by a number of experts on the potential impacts to bird populations from wind farms, a 2006 study based in an intensive monitoring programme conducted between 1999-2006, concluded that the birds in general avoided the wind farms areas and that, whilst some bird species were excluded from some of their traditional feeding areas, the effects on population levels were insignificant.

In Germany brown shrimp fishing, which involves trawling, takes place from the shoreline down to the 20m depth within the 3 nautical mile zone, and is of great economic importance in Lower Saxony. This means that regulated shrimp fishing is permitted in the proposed extension in Germany despite being zone 1 (highest protection). While management responses to reduce shrimp trawling impact are underway, given various conflicting stakeholder interests, the effect of shrimp fishing in the proposed extension poses a potential threat to the ecological integrity of the property. Negative effects from blue mussel collection are considered to have an even greater impact on the proposed extension. Therefore a cohesive plan for sustainable resource use

in the entire property, with clear indicators to ensure that ecological integrity is not being compromised, is required.

All stakeholders recognize that World Heritage status may increase tourism and recreational pressure, and have developed a draft joint strategy for “Sustainable Tourism in the Wadden Sea World Heritage Destination”, aimed at developing high quality, low impact tourism which considers the ecological requirements of the property. While there is strong will supporting this strategy and a zoning system has been developed to regulate activities, its effective implementation will be challenging. There are also military fighter jet exercises over the area as well as many helicopters flying over to service the off-shore platforms, all of which detract from a World Heritage experience.

Threats to the property caused by coastal flood defense and protection, energy generation, pollution with nutrients, shipping and harbour developments require coordination and cooperation of all stakeholders. Threats stemming from climate change (and an inevitable rise in sea level), alien species and shipping safety require an integrated ecosystem approach and the involvement of national governments as well as enhanced international cooperation. The Trilateral Wadden Sea Cooperation, the EU Regulations governing the Natura 200 Network and the EC Habitats Directive, provide a good framework for such cooperation.

IUCN considers that the integrity, the protection and management of the nominated property meet the requirements of the Operational Guidelines.

## 5. ADDITIONAL COMMENTS

The proposed extension of the property is linked to a human-dominated cultural landscape beyond the boundaries of the proposed extension. The settlement history of this territory shows many cultural adaptations to the natural environment in the region, including the construction of numerous mounds and a sophisticated irrigation and drainage system. Therefore the World Heritage status of this area, if inscribed on the World Heritage List, should be proactively used to promote and present the long history of interactions between man and nature in the Wadden Sea.

## 6. APPLICATION OF CRITERIA

The **Wadden Sea** has been nominated under natural criteria (viii), (ix) and (x) as an extension of the Wadden Sea (Germany/Netherlands).

### **Criterion (viii): Earth’s history and geological features**

The-proposed extension reaffirms and strengthens the existing justification for inscription under criterion (viii)

which is: *“The Wadden Sea is a depositional coastline of unparalleled scale and diversity. It is distinctive in being almost entirely a tidal flat and barrier system with only minor river influences, and an outstanding example of the large-scale development of an intricate and complex temperate-climate sandy barrier coast under conditions of rising sea-level. Highly dynamic natural processes are uninterrupted across the vast majority of the property, creating a variety of different barrier islands, channels, flats, gullies, saltmarshes and other coastal and sedimentary features.”*

IUCN considers the nominated property meets this criterion.

### **Criterion (ix): Ecosystems/communities and ecological/biological processes**

The proposed extension reaffirms and strengthens the existing justification for inscription under criterion (ix) which is: *“The Wadden Sea is one of the last remaining natural large-scale intertidal ecosystems, where natural processes continue to function largely undisturbed. Its geological and geomorphologic features are closely entwined with biophysical processes and provide an invaluable record of the ongoing dynamic adaptation of coastal environments to global change. There are a multitude of transitional zones between land, sea and freshwater that are the basis for the species richness of the property. The productivity of biomass in the Wadden Sea is one of the highest in the world, most significantly demonstrated in the numbers of fish, shellfish and birds supported by the property. The property is a key site for migratory birds and its ecosystems sustain wildlife populations well beyond its borders.”*

IUCN considers the nominated property meets this criterion.

### **Criterion (x): Biodiversity and threatened species**

The proposed extension reaffirms and strengthens the existing justification for the Wadden Sea World Heritage property which is: *“Coastal wetlands are not always the richest sites in relation to faunal diversity, however this is not the case for the Wadden Sea. The salt marshes host around 2,300 species of flora and fauna, and the marine and brackish areas a further 2,700 species, and 30 species of breeding birds. The clearest indicator of the importance of the property is the support it provides to migratory birds as a staging, moulting and wintering area. Up to 6.1 million birds can be present at the same time, and an average of 10-12 million each year pass through the property. The availability of food and a low level of disturbance are essential factors that contribute to the key role of the nominated property in supporting the survival of migratory species. The nominated property is the essential stopover that enables the functioning of the East Atlantic and African-Eurasian migratory flyways. Biodiversity on a worldwide scale is reliant on the Wadden Sea.”*

IUCN considers the nominated property meets this criterion.



A summary of new attributes that would be added to the existing inscribed property through the approval of the extension are summarized in the section on “Comparison with other areas” above.

## 7. RECOMMENDATIONS

IUCN recommends that the World Heritage Committee adopt the following draft decision:

The World Heritage Committee,

1. Having examined Documents WHC-14/38.COM/8B and WHC-14/38.COM/INF.8B2;

2. Approves the extension of the **Wadden Sea (Denmark, Germany, Netherlands)** on the World Heritage List under natural criteria (viii), (ix) and (x).

3. Adopts the following Statement of Outstanding of Outstanding Universal Value:

### **Brief Synthesis**

*The Wadden Sea is the largest unbroken system of intertidal sand and mud flats in the world, with natural processes undisturbed throughout most of the area. The 1,143,403 ha World Heritage property encompasses a multitude of transitional zones between land, the sea and freshwater environment, and is rich in species specially adapted to the demanding environmental conditions. It is considered one of the most important areas for migratory birds in the world, and is connected to a network of other key sites for migratory birds. Its importance is not only in the context of the East Atlantic Flyway but also in the critical role it plays in the conservation of African-Eurasian migratory waterbirds. In the Wadden Sea up to 6.1 million birds can be present at the same time, and an average of 10-12 million pass through it each year.*

### **Criteria**

#### **Criterion (viii)**

*The Wadden Sea is a depositional coastline of unparalleled scale and diversity. It is distinctive in being almost entirely a tidal flat and barrier system with only minor river influences, and an outstanding example of the large-scale development of an intricate and complex temperate-climate sandy barrier coast under conditions of rising sea-level. Highly dynamic natural processes are uninterrupted across the vast majority of the property, creating a variety of different barrier islands, channels, flats, gullies, saltmarshes and other coastal and sedimentary features.*

#### **Criterion (ix)**

*The Wadden Sea includes some of the last remaining natural large-scale intertidal ecosystems where natural processes continue to function largely undisturbed. Its geological and geomorphologic features are closely entwined with biophysical processes and provide an invaluable record of the ongoing dynamic adaptation of*

*coastal environments to global change. There are a multitude of transitional zones between land, sea and freshwater that are the basis for the species richness of the property. The productivity of biomass in the Wadden Sea is one of the highest in the world, most significantly demonstrated in the numbers of fish, shellfish and birds supported by the property. The property is a key site for migratory birds and its ecosystems sustain wildlife populations well beyond its borders.*

#### **Criterion (x)**

*Coastal wetlands are not always the richest sites in relation to faunal diversity; however this is not the case for the Wadden Sea. The salt marshes host around 2,300 species of flora and fauna, and the marine and brackish areas a further 2,700 species, and 30 species of breeding birds. The clearest indicator of the importance of the property is the support it provides to migratory birds as a staging, moulting and wintering area. Up to 6.1 million birds can be present at the same time, and an average of 10-12 million each year pass through the property. The availability of food and a low level of disturbance are essential factors that contribute to the key role of the property in supporting the survival of migratory species. The property is the essential stopover that enables the functioning of the East Atlantic and African-Eurasian migratory flyways. Biodiversity on a worldwide scale is reliant on the Wadden Sea.*

#### **Integrity**

*The boundaries of the extended property include all of the habitat types, features and processes that exemplify a natural and dynamic Wadden Sea, extending from the Netherlands to Germany to Denmark. This area includes all of the Wadden Sea ecosystems, and is of sufficient size to maintain critical ecological processes and to protect key features and values.*

*The property is subject to a comprehensive protection, management and monitoring regime which is supported by adequate human and financial resources. Human use and influences are well regulated with clear and agreed targets. Activities that are incompatible with its conservation have either been banned, or are heavily regulated and monitored to ensure they do not impact adversely on the property. As the property is surrounded by a significant population and contains human uses, the continued priority for the protection and conservation of the Wadden Sea is an important feature of the planning and regulation of use, including within land/water-use plans, the provision and regulation of coastal defences, maritime traffic and drainage. Key threats requiring ongoing attention include fisheries activities, developing and maintaining harbours, industrial facilities surrounding the property including oil and gas rigs and wind farms, maritime traffic, residential and tourism development and impacts from climate change.*

#### **Requirements for Protection and Management**

*Maintaining the hydrological and ecological processes of the contiguous tidal flat system of the Wadden Sea is an overarching requirement for the protection and integrity*

*of this property. Therefore conservation of marine, coastal and freshwater ecosystems through the effective management of protected areas, including marine no-take zones, is essential. The effective management of the property also needs to ensure an ecosystem approach that integrates the management of the existing protected areas with other key activities occurring in the property, including fisheries, shipping and tourism.*

*The Trilateral Wadden Sea Cooperation provides the overall framework and structure for integrated conservation and management of the property as a whole and coordination between all three States Parties. Comprehensive protection measures are in place within each State. Specific expectations for the long-term conservation and management of this property include maintaining and enhancing the level of financial and human resources required for the effective management of the property. Research, monitoring and assessment of the protected areas that make up the property also require adequate resources to be provided. Maintenance of consultation and participatory approaches in planning and management of the property is needed to reinforce the support and commitment from local communities and NGOs to the conservation and management of the property. The State Parties should also maintain their commitment of not allowing oil and gas exploration and exploitation within the boundaries of the property. Any development projects, such as planned wind farms in the North Sea, should be subject of rigorous Environmental Impacts Assessments to avoid any impacts to the values and integrity of the property.*

4. Commends the State Parties of Germany, Netherlands and Denmark for their joint efforts in extending this property.

5. Requests the State Party of Denmark, in cooperation with the State Parties of the Netherlands and Germany, to prepare an implementation plan to enhance the conservation and management of the attributes of Outstanding Universal Value within the Danish National Park. This could be supported by the development and adoption of a binding agreement between the Danish Nature Agency and the National Park Board.

6. Requests the State Parties of Denmark, Germany and the Netherlands to develop a single integrated management plan for the entire transboundary property in conformity with the requirements of Paragraph 111 of the Operational Guidelines, and to consider the options to strengthen the effectiveness of implementation of coordinated management within the property.

7. Recommends the States Parties to extend further the monitoring of impacts of fisheries activities within the existing and extended property, and consider the opportunities to ensure protection of the property from any detrimental impacts.

8. Further requests the State Parties of Denmark, Germany and the Netherlands to submit, by **1 February 2016**, a joint report, including a 1-page executive summary, on the state of conservation of the property, including confirmation of progress on the development and adoption of the integrated management plan and the institutional and financial provisions that will be in place to ensure its effective implementation.

**Map 1:** Proposed extension location



**Map 2:** Proposed extension

