



Seabed meets Horizon

Nationalpark
Wattenmeer



SCHLESWIG-HOLSTEIN

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Seabed meets Horizon

The tidal flats between Den Helder in the Netherlands and Esbjerg in Denmark are the largest continuous tidal flats in the world and one of the last areas in Europe where nature can still develop to a great extent without human influence. So that this can continue, the German coastal states declared it as National Parks: in 1985 the Schleswig-Holstein Wadden Sea, in 1986 Lower Saxony Wadden Sea and in 1990 the Hamburg Wadden Sea. The Wadden Sea in Schleswig-Holstein, Niedersachsen and the Netherlands was placed on the UNESCO World Heritage List in 2009.

National Parks are symbols of untouched nature. Here nature may develop freely, without human intervention. The idea came from the USA. There the first National Park in the world was declared in 1872 - Yellowstone, a mountain landscape with geysers and sulphur springs. In Germany there are 14 of these special protected areas.

'Let nature be nature' is the objective of all National Parks. All of nature should be maintained – not just the animals and plants, but the scenery in its totality, with mountains and lakes or, in our case, tidal flats and tidal creeks, dunes and salt meadows. So that people can be amazed today and in the future, research and recreation take place there.



Of the three Wadden Sea National Parks, Schleswig-Holstein has (with 30 kilometres) the widest tidal flat belt between mainland and open sea.



Only here are the Halligen found. They have mostly low dykes and therefore flood during storms. Then only the artificial mounds („Warften“), on which the houses stand, rise from the water.

Certified tidal flats

Schleswig-Holstein Wadden Sea is more than just a National Park. It fulfils different international criteria for protected areas and was identified as

- *United Nations Biosphere Reserve which also includes the Halligen.*
- *EU Birds Directive and Flora and Fauna Habitats Directive site (incl. the Halligen)*
- *Wetland of International Importance under the Ramsar Convention (incl. the Halligen)*
- *Particularly Sensitive Sea Area of the International Maritime Organization.*

Between Land and Sea

From the salt marshes to the tidal creeks, from the dunes to the sand banks - the tidal flats form the meeting point between land and sea. The tidal flat surfaces are flooded twice a day at high tide. The tidal range is three metres. The tidal creeks, which wind like rivers through sand and silt, form the connection with the open sea.

Feathered Guests

Twice a day the seabed meets the horizon: low tide exposes tidal flats full of worms, mussels and snails – a feast for birds. In late summer and autumn four millions feathered guests use the tidal flats, salt marshes and sands of the National Park as a feeding place or to rest.

On the long journey between the breeding areas in Scandinavia, north Siberia and north-east Canada and the over-wintering sites in Western Europe and West Africa, the food rich tidal flats are a vital stopover for about 25 species of migratory birds. 30 coastal bird species, with 100,000 pairs, breed in the Schleswig-Holstein National Park. During hatching time the most important nesting



For the Common Shelduck the southern part of the National Park is an important moulting place. 200,000 of these white, russet and black ducks, 90 percent of the European population, arrive there from July to change their plumage. They come from Scandinavia and the Baltic States, from France and England. They cannot fly for four weeks. In the tidal creeks and tidal flats around the island of Trischen, they can find, on foot or by swimming, enough food and protection to get through this time.



The Brent Goose breeds in northern Siberia and boosts her energy level for the long flight ahead with plants from the salt marshes. In particular, 40,000 Brent Geese graze on the Halligen in April and can be observed from close by – for example on Brent Goose Days in the spring (www.ringelganstage.de).

places on beaches, in salt marshes or dunes are closed off by National Park Rangers and by employees of nature conservation organisations.

Breeding and resting bird numbers in Schleswig-Holstein Wadden Sea

Bird species	Maximum number (2004 - 2006)	Period with maximum number	Amount of Western European population (%)	Breeding numbers (2005)
Barnacle Goose	102.000	Spring	28	28
Brent Goose	84.000	Spring	39	0
Common Shelduck	216.000	Summer	72	2.000
Wigeon	160.000	Autumn	11	13
Common Eider	215.000	Autumn	21	500
Oystercatcher	177.000	Autumn	17	13.000
Pied Avocet	8.000	Spring	12	4.100
Grey Plover	49.000	Spring	20	0
Knot	391.000	Spring	50	0
Dunlin	502.000	Spring	38	0
Bar-tailed Godwit	158.000	Spring	25	0
Curlew	61.000	Autumn	15	5
Redshank	14.000	Autumn	4	4.600
Black-headed Gull	80.000	Autumn	1	26.000
Herring Gull	57.000	Autumn	4	13.000

Seals and Porpoises

In the Schleswig-Holstein Wadden Sea there are about 8,000 Common Seals and 200 Grey Seals. The male Grey, at more than two metres body length, is half a metre bigger than the Common Seal. Both seal species are Germany's biggest predators.

In the National Park there are some 1,000 Harbour Porpoises, a 1.5 metre long relative of the dolphin. Many female Harbour Porpoises with their young are regularly sighted off the west coast of Sylt and Amrum. Therefore, a cetacean protection area was established there as a part of the National Park.

Common Seals, Grey Seals and Harbour Porpoises are the top of the food chain in the Wadden Sea. Here one can observe them in large numbers, in contrast to the mainland where large predators like brown bear or wolf are absent.



Common Seals live on fish which they catch on long hunts far out in the North Sea. Afterwards they rest on the sand banks of the National Park. The young (pups) also come into the world on the sandbanks. Respect should be given to this when visiting the seal sandbanks.



The Lugworm lives in a U-shaped burrow 25 centimetres deep in the ground. It eats sand, digests the bacteria and algae living in it and excretes typical worm casts made of cleaned fine sand.

Worms and Molluscs

An enormous variety of (small) invertebrate animals inhabit the Wadden Sea. Especially the salt marshes have a diverse invertebrate fauna. The tidal flats contain a higher animal biomass than tropical forest. Beside crabs, mussels and snails there is a microcosm of tiny living creatures. They live in the spaces between the sand grains.

At the beginning of the food chain are bacteria and single cell algae. On the surface of the tidal flats they can be clearly recognized as a red-brown layer, crossed by fine stripes: these are the food tracks of the tiny (few millimetres long) Marine Mud Snails, with up to 120,000 individuals per square metre.

The branched tidal creeks, the water veins of the tidal flats, are a nursery for a number of fish species: possibly half of the flounders, herrings and soles which appear in the North Sea have grown up here. In addition there are many small crustaceans. These shrimps and small fish are food for gulls and terns and also for seals and porpoises.

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The National Park at a Glance

The Schleswig-Holstein Wadden Sea National Park is the biggest to be found between the North Cape and Sicily. It starts 150 metres seawards from dyke and dunes. The inhabited islands and Halligen are not included in the National Park area.

National Park area:

4,410 km² = 441,000 ha,
99,9% owned by the State of Schleswig-Holstein

Protected Zone 1:

1,570 km², of which 125 km²
unmanaged area

Protected Zone 2:

2,840 km², of which 1,240 km²
cetacean protection area

Legislation:

National Park Law 1985,
amended 1999

Inhabitants:

2 permanent residents (on
Hallig Süderoog), about 2,300
plant species and 4,200 animal
species

High and low points:

+8 m (Warft on Süderoog),
to -27 m to the south of Amrum



Marshes by the Sea

Salt marshes are only slightly above sea level; some are flooded more than 100 times per year. As a result about 40 highly specialised plant species grow here which are adapted to the water and salt. The purple flowered Common Sea Lavender or the fragrant Sea Wormwood can grow where they are not grazed by sheep. The grass and herbs of the salt marshes are a habitat for about 1,800 insect and spider species of which 250 are only found here, for example *Pseudaplemonus limonii*, a weevil living only on Sea Lavender.



25 insect species live on the Sea Aster.



Until the beginning of the 1990s, most of the 70 square kilometres of salt marshes in the National Park were used for sheep grazing. The short-grazed marshes were very poor in species. Today there is a mosaic from the completely ungrazed salt marshes on which the Common Sea Lavender flowers again to the lightly and heavily grazed areas.

People in the National Park

305,000 people live in the districts of Nordfriesland and Dithmarschen which border the National Park, 33,000 of them on the islands of Sylt, Amrum, Föhr and Pellworm, 300 on the Halligen. 100 shrimp- and 8 mussel-cutters operate in the National Park, 42 farmers are allowed to put sheep out to pasture on the salt marshes.



The Multimar Wattforum in Tönning is the biggest National Park information centre. 200,000 visitors a year experience the aquariums, 18 metre long sperm whale skeleton and many interactive exhibits.

The most important economic factor for residents of the National Park area is tourism. It contributes to 37 percent of people's income on the Schleswig-Holstein North Sea coast. The National Park and the west coast receive 2 million overnight stays and 14 million day visitors per year.

Nature conservation organisations, National Park tidal flat guides and National Park rangers offer over 10,000 trips and tidal flat tours, boat tours with wildlife watching and similar activities. Up-to-date notices, leaflets and the internet provide further information.

Laws of the Tidal Flats

The laws of the National Park are based on those passed in 1985 by the Schleswig-Holstein parliament (amended in 1999). The National Park is split into protected zones: Protected Zone 1 is largely left to nature, while Protected Zone 2 can have limited use.

To do justice to nature as well as to people, there are many exceptions and special provisions for visitors and National Park users with local rights. Thus, shrimp fishing is permitted in Protected Zone 1. An absolutely untouched 'unmanaged area' of 125 kms² exists between the islands of Sylt and Föhr. To the west of Sylt and Amrum is a cetacean protection area which is part of Protected Zone 2.

Voluntary arrangements were agreed with fishermen, boat owners, water sport associations and local authorities. For example, shrimp fishing boats and sports boats avoid creeks and channels in the southern tidal flats in the county of Dithmarschen from July to September because the Common Shelduck moult there at this time.

Angling, swimming or taking photos are permitted in areas that may be entered.



Permitted (+) and forbidden(-)

Activity	Protected Zone 1 unmanaged area (to the north of Föhr)	Protected Zone 1 remaining area	Protected Zone 2
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Individuals

Travelling by boat	+1	+1	+1
Access	-	-2	+
Flying kites	-	-2	+
Let dogs run free	-	-	-
Hunting	-	-	-
Collecting archaeological remains	-	-	-
Collecting mussels ^{3,4}	-	-2	+
Collecting seashells	-	-2	+
Picking plants	-	-	+ ⁵
Horse riding	-	-6	-6
Disturbing animals	-	-	-
Overnight camping	-	-	-
Walking on tidal flats	-	-7	+
Digging worms ⁴	-	-2	+

Commercial

Oil production	-	-	-8
Fishing for oysters	-	-	-9
Fishing for shrimps and fish	-	+	+
Fishing for cockles	-	-	-
Fishing for mussels ¹⁰	-	-6	+ ¹¹

¹ certain areas on sea charts may not be sailed on beyond the low tide mark

² permitted approx. 1 km from the coast (observe local signs)

³ Oysters and mussels for own consumption, max. 10 l/day

⁴ Fishing permit necessary

⁵ Small bunch, with the exception of Common Sea Lavender and Sea Thrift

⁶ only certain areas

⁷ only near to coasts (approx. 1 km) and on certain routes with tidal flat guides

⁸ only from the oil platform Mittelplate A

⁹ only to the east of Sylt and Amrum

¹⁰ only in the underwater area

¹¹ not in tidal flats that dry out

Who Does What?

The National Park Administration in Tönning acts as a service provider which brings together the protection of nature with the interests of locals and visitors, farmers and yachtsmen, shrimp fishermen, tidal flat guides, scientists and many others. It co-ordinates and approves research, projects and necessary maintenance and construction work. Together with the other Wadden Sea states, it organizes extensive environmental monitoring programmes in which, for instance, seals and birds are counted and biological phenomena are documented. The general public is kept informed by the rangers and information centres such as the National Park information centre Multimar Wattforum, as well as through the

National Park Partners

Tourism companies and authorities which are especially connected to the National Park can become National Park partners. They meet special high-level criteria and inform guests and customers about the National Park and the region. Tidal flat guides, tour operators, rail companies, accommodation companies, shipping companies and others offer excursions, tours or lodgings with high-class National Park experiences.

www.nationalpark-partner.de

Halligen Biosphere

Since 2004 the five inhabited Halligen of Langeneß, Oland, Hooge, Nordstrandischmoor and Gröde have belonged to a development zone of the 'Biosphere Reserve Schleswig-Holstein Wadden Sea and Halligen', or 'Halligen Biosphere' in short. Thereby they have become a part of a worldwide network of UNESCO model regions in which nature and humans live together. The objectives include the protection of nature, sustainable management, socially fair development, as well as education, research and environmental monitoring.

www.halligen.de

media. Attractive environmental education programmes are offered to schools and teachers.

The National Park Administration is subordinate to the Schleswig-Holstein Ministry of the Environment. Important decisions concerning the National Park are discussed by the National Park Committees of Nordfriesland and Dithmarschen. The National Park Administration is strongly supported by nature conservation associations. Some of them were operating for a long time before the National Park was created to preserve Wadden Sea. They warden National Park areas and run National Park information centres, support environmental monitoring and lead numerous excursions in the National Park.



The young people who perform their national service or voluntary ecological year in the nature conservation associations have something in common with the rangers: their enthusiasm for the National Park. Get inspired too!

Schleswig-Holstein Agency
for Coastal Defense,
National Park and
Marine Conservation

Production

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North Sea Hotline 01805 0666077 (14 ct/Min.)
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