The Wadden Sea

A vision for the conservation of a Natural Heritage

BirdLife INTERNATIONAL

COLOPHON

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BirdLife INTERNATIONAL

BirdLife International is a worldwide partnership of conservation organizations working to protect the world's birds and their habitats.

A true wilderness

Did you ever visit the Wadden Sea? We did and we still cherish our memories... Memories of the glistening pristine sand and mudflats, the endless horizons and the immense flocks of birds. An area of outstanding natural beauty. We feel proud and privileged to have such an area bordering our three countries. Even more now that the Wadden Sea has been added to the World Heritage List by UNESCO.

The Wadden Sea is a true wilderness, one of the last in Northwest Europe. An immense tidal area characterized by vast mudflats, it stretches over three countries: Denmark, Germany and the Netherlands. It is of crucial importance for millions of migratory birds. Some stop to rest and refuel on the journey between their Arctic breeding grounds and their wintering sites in West Africa, while others stay for the winter. In spring and summer, important populations of seabirds and shorebirds breed on the salt marshes, beaches and islands around the Wadden Sea.

But the high natural values of the Wadden Sea are threatened by human activities. Large scale fisheries, growing mass tourism, military training, industrial developments, intensive farming, and last but not least, the effects of climate change, are damaging the fragile ecosystem. The populations of many bird species, both breeding and migratory, are in decline. The traditional, sustainable livelihoods of human communities around the Wadden Sea also face a bleak future.

The BirdLife Partners of Denmark, Germany and the Netherlands have – for the first time – joined their forces. As a first result of our cooperation we present this brochure, in which we set out our aspirations for the Wadden Sea, and stand up for ambitious conservation goals. We are convinced that after reading this brochure you will join us in our efforts to keep the Wadden Sea a wilderness for generations to come. A place where birds, and people, can thrive.

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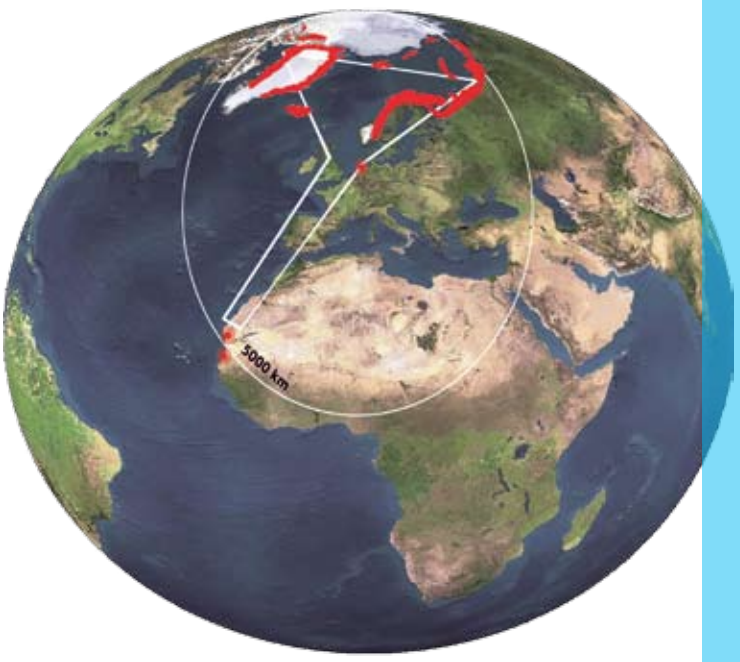
The number of birds in the Wadden Sea is overwhelming. Attracted by abundant food and undisturbed habitat, around twelve million birds breed or over-winter, or stop to rest and refuel on their migratory journeys. At low tide the exposed mudflats are full of waders and other birds. Knots are busy probing the mud for shellfish. Ducks dive into gullies for crabs and bivalves. Wading spoonbills sweep their bills through the water, and terns hover and plunge after fish. When a peregrine falcon suddenly appears, thousands of oystercatchers take flight. In summer, waders, ducks and geese arrive in the Wadden Sea from their northern breeding areas. Many of these birds over-winter. Many more fly on to the south; these birds will reappear in the Wadden Sea on their return journey in spring. We are talking about a wetland of global importance, home to important populations of scores of species of waders and other waterbirds, and a key link in the East Atlantic Flyway.

A site of international importance

A large part of the Wadden Sea was recently listed as a UNESCO World Heritage Site in recognition of its international importance as one of the main breeding, staging, moulting and wintering areas for millions of migratory waterbirds. Its strategic position and rich stocks of food make the Wadden Sea an essential crossroads of migratory routes. In international counts, the numbers of birds per species run into hundreds of thousands of individuals, among others for brent goose, eider, knot, dunlin, oystercatcher and bar-tailed godwit. In spring and summer, large numbers of birds also breed in the dunes, on the beaches and in the salt marshes. Half of Northwest Europe's avocets breed in the Wadden Sea area, together with forty percent of the region's Sandwich terns, and ten percent of its ringed plovers.



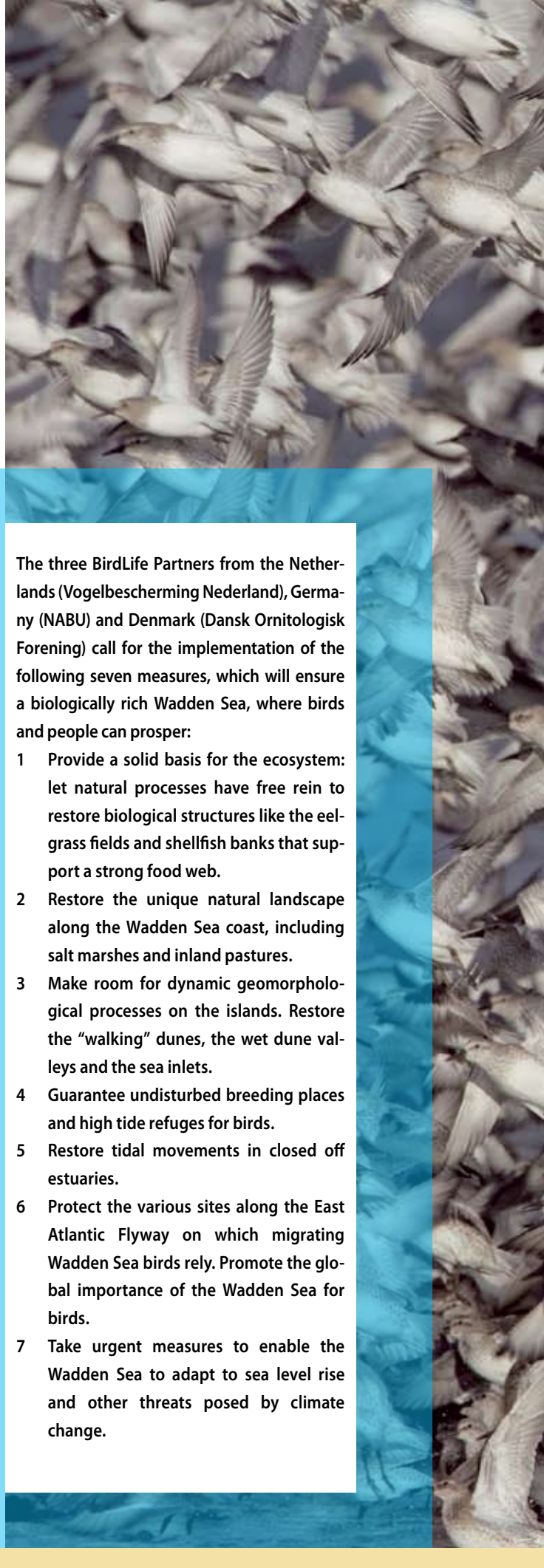
East Atlantic Flyway

For about six million birds, the East Atlantic Flyway starts in the tundras of Siberia, Greenland or Northeast Canada. After the breeding season waders, ducks and geese prepare for the long journey to the Wadden Sea, where they stage and refuel. Many of these birds remain for the winter. At least 3.5 million migrate further south, to wetlands along the western coast of Africa, in particular, the Banc d'Arguin in Mauritania, and the Bijagos Archipelago (Guinea-Bissau), one of the southernmost points of this flyway. These two areas are the final winter destination for about eighty percent of the knots of the nominate subspecies.

An urgent appeal

The Wadden Sea is one of the last true wilderness areas in Northwest Europe, stretching from Den Helder in the Netherlands to the peninsula of Skallingen in Denmark. Home to many threatened breeding birds, it is also the most important stopover area for millions of migrating waders in Europe, linking their Arctic breeding grounds with the wintering areas in West Africa. But populations of many species, both breeding and migratory, are in decline, reflecting major environmental problems in the Wadden Sea. To address these serious conservation challenges three BirdLife Partners from Denmark, Germany and the Netherlands have joined their forces. In this brochure DOF, NABU and Vogelbescherming Nederland present their aspirations for the Wadden Sea. So far, government policies have not been able to turn the tide. The three organisations are making an urgent appeal. We stand up for an ambitious conservation programme for the Wadden Sea.

The numbers of some bird species for which the Wadden Sea is of international importance have dropped significantly since 1987. These trends are alarming. Regular monitoring shows, for example, that eiders, oystercatchers and Kentish plovers are declining in numbers severely. These birds are highly specialized species which depend on the healthy functioning of the Wadden Sea's uniquely varied ecosystem of intertidal mudflats, salt marshes and sand banks. Their plight is a reliable indicator of the declining condition of the Wadden Sea.



The three BirdLife Partners from the Netherlands (Vogelbescherming Nederland), Germany (NABU) and Denmark (Dansk Ornitologisk Forening) call for the implementation of the following seven measures, which will ensure a biologically rich Wadden Sea, where birds and people can prosper:

1. **Provide a solid basis for the ecosystem: let natural processes have free rein to restore biological structures like the eelgrass fields and shellfish banks that support a strong food web.**
2. **Restore the unique natural landscape along the Wadden Sea coast, including salt marshes and inland pastures.**
3. **Make room for dynamic geomorphological processes on the islands. Restore the "walking" dunes, the wet dune valleys and the sea inlets.**
4. **Guarantee undisturbed breeding places and high tide refuges for birds.**
5. **Restore tidal movements in closed off estuaries.**
6. **Protect the various sites along the East Atlantic Flyway on which migrating Wadden Sea birds rely. Promote the global importance of the Wadden Sea for birds.**
7. **Take urgent measures to enable the Wadden Sea to adapt to sea level rise and other threats posed by climate change.**

The Wadden Sea originally had an irregularly shaped coastline with deep inlets, where water could flow in and out freely. Seawater penetrated inland through wide estuaries and small mudflat creeks. In many places the salt seawater mixed with fresh water from rivers and created a rare brackish ecosystem. Such creeks and inlets are very important for biomass and the diversity of fish, on which birds depend.

Making space for the tides in estuaries

Along the mainland Wadden Sea coast and on the islands there are numerous opportunities for creating a brackish zone, where salt and fresh water meet. The three BirdLife Partners call for a more natural regime for outlet sluices. Dams could partially be opened, without jeopardising safety. This will give migratory fish, which include important prey species for birds, the opportunity to swim in and out, and to reach their spawning grounds. Areas with possibilities for improvement of the brackish ecosystem are along the Dutch Afsluitdijk and in the Lauwersmeer (Netherlands), in the Varde River mouth (Denmark) and in the mouth of the River Stör (Germany).

Spoonbills

As a result of water pollution the population of spoonbills decreased dramatically in the sixties and seventies of the last century. Conservation measures led to a population increase in the past decade. This growth is mainly taking place on the islands in the Dutch part of the Wadden Sea, from where spoonbills are now colonizing the German and Danish parts of the Wadden Sea. An especially important food for spoonbills is the three-spined stickleback. This fish lives in salt water, but migrates to fresh water in spring for spawning. For sticklebacks, the Wadden Sea coast with its dikes and sluices has become an almost impenetrable fortress. For spoonbills, it is important that these fish can migrate without obstruction, for instance by using fish ladders and a fish-friendly sluicing regime.

Twice every day the tidal mudflats are covered by the sea. When the tide ebbs, the gleaming mud has been freshly enriched with organic matter. As a result, the mudflats are teeming with life, providing a crucial refuelling stop for millions of migratory birds.

Rich mudflats for birds

Need for a strong food web

Biological structures like mussel banks and eelgrass fields are important parts of the ecosystem. Apart from being a main food source for many birds, they harbour great biodiversity, including fish, shrimps and algae. Furthermore, they help the Wadden Sea to keep up with sea level rise, by absorbing silt and sediment. In earlier times, the mudflats were covered with extensive mussel banks; now only small banks are left in the German and Danish Wadden Sea. In the Netherlands these banks have virtually disappeared, as a result of the intensive mechanical fishery. The three BirdLife Partners call for a halt to the bottom-dredging fisheries that severely damage the basis of the Wadden Sea ecosystem. They plead for a fishing ban in several areas, preferably consisting of two or more interconnected tidal inlets. An empty sea is of no use to anyone, fisheries included. Whether the degraded mudflats will recover remains to be seen, and is the subject of continuing research.

Birds need undisturbed feeding and roosting sites
Birds need quiet, undisturbed feeding and roosting opportunities. When disturbed, they expend vital reserves of the energy they need to migrate. Roosting areas without human disturbance are as necessary as undisturbed mudflats for feeding. The BirdLife Partners call for good education and awareness raising-programmes for people involved in recreational activities like sailing and walking. The most important roosting and breeding sites must have restricted public access. Adequate use of legislation, for example in the case of military activities, is essential to reach this goal.

Apart from migratory birds, there are many breeding birds that are very sensitive to human disturbance. For instance, Kentish plovers and little terns, which breed on beaches and elevated sand banks, can be helped by educating local people and visitors, and by restricting recreational activities at places that are crucial for breeding birds.

Reduction of shell fisheries in the Dutch Wadden Sea

Shellfish like mussels, cockles and Baltic tellins are important prey for many bird species, such as eider, oystercatcher and knot. The knot is a global wanderer that breeds in Greenland, Canada and Siberia. Greenland knots winter in the Wadden Sea but the numbers of knot in the western parts of the Wadden Sea have declined in recent years because of the damage done by shell fisheries. In the Dutch Wadden Sea, the large-scale industrial cockle fishing has been banned, and the reduction and transition of other bottom dredging fisheries (mussels, shrimps) to more sustainable methods is in progress. Without doubt, species like knot will benefit from these measures.

Eiders

In the 1960s, seventy-five percent of the Dutch eider population died as a result of toxic waste transported by the river Rhine. Fortunately the numbers recovered quickly, but at the beginning of this century, the number of Dutch eiders declined again. This time over-fishing of mussels was the cause. This forced the eiders to migrate to the North Sea, where they had to switch to a different and insufficient food source. This resulted in the mass mortality of 21,000 eiders.

A wide and varied salt marsh landsca

Salt marshes are an indispensable link between the sea and land. But with the accelerating pace of reclamation around the world, salt marshes are becoming a rare type of habitat. Along most of the Wadden Sea coast, little of the original salt marsh remains, but it is vitally important for birds. During high tide many waders and gulls settle there in large numbers to roost. Geese and wigeons feed on salt-tolerant plants. Oystercatchers, redshanks and meadow pipits breed on the drier, grass-covered parts. The salt marshes of the Wadden Sea are an important winter habitat for passerines breeding on mountains and tundras in the north, such as twite, shore lark and snow bunting.

Extending the salt marsh area

The three BirdLife Partners want the remaining salt marshes to be conserved and extended where possible.

In the past a broad belt of natural salt marsh could be found along the entire Wadden Sea coast, but this has drastically decreased, perhaps even halved since 1850. Of the once huge salt marsh landscape, all that remains in many places is a small strip along the Wadden Sea dike. Much former salt marsh has been embanked to create polders. One possible way of enlarging these rare habitats is 'de-poldering', by removing the embankments to restore access by the sea. This has recently been done in the north of the Netherlands (see *Avocets,* box opposite).

Habitat diversity on the salt marshes

A natural salt marsh with a mosaic of diverse habitats is rich with birdlife. Birds make use both of the parts kept short by grazing, where geese forage and avocets build their nests, and areas with taller vegetation, where black-tailed godwits and redshanks breed and young birds take shelter. Birds also prefer the ground to be damp and marshy. But many salt marshes are grazed too intensively, and criss-crossed with ditches to drain away the water as fast as possible. Filling in the ditches, or just stopping maintenance work on them, enables the natural salt marsh habitat to restore itself. The water is retained, and flows more slowly towards the sea through gullies.

Waders and ducks also need undisturbed high tide roosting areas. Walkers and hunters, however, disturb many roosting birds on the salt marshes. An expansion of the Danish hunting ban to include all high tide roosts together with the adjacent polders would greatly benefit roosting opportunities for these birds.

Brent geese

Brent geese are real 'Wadden geese'. From September to May, up to 250,000 of these small dark geese, with their characteristic 'rrot-rrot' call, live in the Wadden Sea. In the past, brent geese could be found on the extensive eelgrass fields and salt marshes. After the disappearance of the eelgrass in the western Wadden Sea in the 1930s, and the reclamation of salt marshes, large numbers of these geese were forced to move to farmland to graze and roost, where they were hunted intensively. Since hunting was banned, the population in the Wadden Sea has increased tenfold.

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Gull-billed terns

The gull-billed tern is one of the rarest birds in Northwest Europe. It breeds in very small numbers along the Wadden Sea coast of Schleswig-Holstein (Germany). The population is still declining. Although never common, the gull-billed tern formerly also bred in Denmark and in the Netherlands, but is now extinct as a regular breeding bird in both countries. Gull-billed terns differ in their feeding strategy from other tern species. They feed less on fish, and more on terrestrial prey. Their habitat requirements are highly specialized. Short-grazed, partially flooded salt marshes and meadows with gullies, small freshwater pools and ditches are their favourite habitat. Gull-billed terns breed in colonies with black-headed gulls and Sandwich terns, and are vulnerable to human disturbance and mammalian predators.

Avocets

Elegant black-and-white avocets dip and sweep their upward-curving bills through muddy water, finding small crustaceans and worms by touch. The Wadden Sea is very important for this species: with about 12,000 breeding pairs, it hosts nearly half Northwest Europe's breeding population. But avocet numbers are declining due to the lack of suitable breeding sites, safe from mammalian predators. Sea level rise, resulting in more frequent spring floods, also threa-tens breeding avocets. Breeding success in artificial wetlands is often very low, but habitat creation and restoration projects can be favourable for avocets. In Polder Breebaart – a Dutch inland polder where seawater was allowed in for the first time in 2001 – the first avocets arrived soon after construction. In the next year hundreds of pairs of avocets started to breed there.

Wandering dunes, undisturbed beach

Beaches and dunes make the Wadden Sea islands an area of outstanding natural beauty and importance. The dunes host many bird species. Berries, insects and seeds provide food for wintering, migrating and breeding birds. Rabbit holes, dense shrubs and herbal vegetation offer good nesting opportunities. The beaches of the Wadden Sea islands are important nesting sites for several threatened ground-nesting birds, including the Kentish plover.

Dynamic dunes

In natural dune systems, wind and water are important components of the geomorphological processes that enable young dunes to wander freely. In many places these natural dynamics have been artificially curbed to defend the land against the sea, and the cycle of succession and renewal of the dune habitat has been arrested. Other factors play a role in stabilizing the dunes, including invasion by native grasses and other plant species as a result of nitrogen deposition and acid rain, dehydration, and the lack of wild and domesticated grazers like rabbits and sheep. The bird species that favour this habitat, including hen harriers, short-eared owls and northern wheatears, have declined severely. In the Netherlands, wheatear numbers have decreased by eighty-five percent in the past forty years.

BirdLife wants to save or restore the important natural dynamic processes of wind, water and sand. In the long term, this is the best approach to conserving the dune ecosystem and its birds. Management measures like mowing and grazing are only short and medium-term solutions, which stop the encroachment of scrub into the dunes.

Ground-nesting birds

BirdLife wants the Wadden Sea beaches and small islands to

be safe breeding havens. Species like little tern and Kentish plover breed in pioneer coastal habitat: sandy beaches and small islands, which are almost free of vegetation. Along a natural dynamic coast, such sites appear and disappear again in space and time. This results in plenty of undisturbed locations where the birds have a chance of breeding successfully before the new sites are found by predators. But these birds are losing the fight for a place on the beach. Human intervention has resulted in a more static coast, and birds that do find a breeding place are increasingly likely to be disturbed by human visitors to the seaside.

Ground-nesting birds are dependent on undisturbed breeding sites. That's why seventy percent of all the colonially-nesting birds in the Danish Wadden Sea breed on the uninhabited and predator-free island of Langli.

es and small islands

Return of the stone curlew?

The stone curlew, a mysterious wader of dry habitats, has vanished from the dunes of the Wadden Sea. The last Dutch breeding pair dates back to 1957. But over the last decade, stone curlews have increased in the south of England. It is possible that in future, stone curlews from England will colonize the Dutch dunes again. Since this species is shy and vulnerable to disturbance, management of likely breeding habitats must include control of public access and recreation.

Sandwich tern

Nearly half of all Sandwich terns of Northwest Europe breed in the Wadden Sea. And of those 17,000 breeding pairs, 10,000 are found on one Dutch island, Griend. This island is of crucial importance to the whole population. The limited number of colonies in the Wadden Sea makes the Sandwich tern vulnerable. The dangers include storm tides, which wash away the nests, and disturbance through recreation. Sandwich terns live on fish like sand lance, herring and sprat. They hover over the water, and plunge on their prey from a height. The number of Sandwich terns in the Wadden Sea decreased dramatically around 1960, because of poisoning by agricultural pesticides that the birds accumulated through eating contaminated fish. The population is now recovering.

On the inland side of the sea dikes, cattle are grazed, and grass, potatoes and cereals are grown. The open agricultural areas bordering the Wadden Sea are important for many birds, especially those that inhabit wet grasslands, like black-tailed godwits and oystercatchers. At high tide, birds like wigeons, curlews and golden plovers, which search for their main food on the mudflats, fly to the inland marshes and grasslands to roost and feed. Large numbers of brent and barnacle geese feed on grasslands and arable fields during autumn, winter and spring.

Inland marshes as wet meadows

For centuries, the marshes near the dikes of the Wadden Sea were mainly used for extensive grazing of cattle and sheep. The clay soil was fertile and produced good pasture, which was also ideal for birds. They were used for roosting and feeding at high tide, and were also popular with wet grassland waders like black-tailed godwit, redshank and lapwing. But in recent decades the industrialization of agriculture has changed the landscape radically. Traditional small-scale cattle breeding has largely disappeared, and been replaced by large-scale arable monocultures.

Meadow birds have suffered: breeding ruffs and dunlins have nearly disappeared, while black-tailed godwits, lapwings and redshanks are decreasing at an alarming rate. The most important measure for the conservation of meadow birds is the re-establishment of wet permanent grassland. Mowing regimes which take account of nesting birds, reduced grazing pressure, and controls on excessive use of slurry as fertilizer will also have a positive influence on meadow birds.

Barnacle goose

Barnacle geese prefer open, short-grazed agricultural grasslands along the Wadden Sea coast. The highest numbers occur in winter, from October onwards. In April and May, barnacle geese depart for their spring migration to the Siberian tundra. Numbers of wintering barnacle geese strongly increased during the last decades, because reduced hunting and the increased nutritional value of agricultural grasslands resulted in higher survival rates. In recent decades, barnacle geese have even started to breed along their flyways. This began on the Swedish island of Gotland, followed by the Danish island of Saltholm, and spread to the Netherlands, where they mix with feral barnacle geese. Nowadays barnacle geese breed in the entire Wadden Sea.

Some typical bird species of the Wadden Sea are not doing well. Species that feed on shellfish, like oystercatcher and eider, are having a particularly hard time, indicating a deterioration of the ecosystem. The decline in numbers of birds visiting and breeding in and around the Wadden Sea is at least partly due to problems in the area itself. The human pressure on nature is still considerable. From over-fishing to hunting, from disturbance to water pollution: an undisturbed and richly stocked highway restaurant for millions of migratory birds is in danger, leaving the birds of the East Atlantic Flyway with nowhere else to go.

Birds of the Wadden Sea face multiple threats

Lack of food

The importance of the Wadden Sea is partly due to the enormous amount of biomass it provides for feeding birds. However, the main menu item for scores of bird species – shellfish – is seriously depleted in many parts of the Wadden Sea. One of the causes is the bottom-dredging fishery. Large fishing vessels scrape their nets along the sea floor, destroying the biodiversity-rich communities that live there. The mechanical cockle fishery has wreaked havoc in the Dutch Wadden Sea in particular. Its activities have now been restrained, but were responsible among other things for the loss of 15,000 oystercatchers. Recent studies on the impact of the cockle fishery concluded that the area of mudflats containing sufficient shellfish for feeding knots decreased by fifty-five percent between 1996 and 2005. During the same period, knot numbers decreased by forty-two percent. The shrimp fishery, which is increasing each year, is also responsible for a large bycatch of young fish, which reduces the food available to most fish-eating birds; only the scavenging lesser black-backed gull seems to profit.

Lack of space

The first human settlers in the Wadden Sea encountered a wild area with extensive salt marshes, where the sea

was lord and master. In the battle against the rising water, they constructed terps (mounds on which settlements were built), dikes and sluices. Over the centuries the Wadden Sea shore has moved towards the sea, swallowing up the marshes and mudflats. In 1932, the Netherlands closed off the Zuiderzee with the Afsluitdijk; in 1969, the Lauwerszee was dammed up. Further large areas have been reclaimed in recent years. In 1981, the Margrethe Kog and then the Rickelsbüller Koog were reclaimed along the German-Danish coast, a total area of 1,100 hectares. In 1987, Germany's Beltringharder Koog followed, taking another 3,300 ha from the sea. What remains of the Wadden Sea is deteriorating in quality. The dune and marsh habitats are increasingly degraded, and inside the dikes, the bird-friendly meadows are disappearing. Increasingly nature has to compete with fisheries, tourism, hunting and shipping. In Germany, the oil industry is keen to increase drilling activities; in the Netherlands, the decision was made to start extracting gas from under the Wadden Sea. The list of new forms of human interferences is endless, from deepening the shipping lanes to expanding industrial harbours, from wind farms to new holiday villages.

Insufficient dynamics

What is lacking in the Wadden Sea is room for the operation of the natural forces that make this area so special.
The howling wind that erodes the dunes, the tide that transports grains of sand in and out of the Wadden Sea, and the water that flows over the salt marshes. These natural processes have been curbed, and centuries of interference have transformed large parts of the Wadden Sea into a man-made landscape. Dikes, sluices, shipping lanes and harbours stop much of the movement of sediments. The wind blows, but beach grasses hold the sand in place. The tide drags, but dredgers suck away the accumulated sand, and seawater splashes against rigid dikes and sluices. Wind, water and tide need to be set free once again in large parts of the Wadden Sea.

Climate change

As a result of all the interferences with the natural dynamics of the Wadden Sea system, it has lost a lot of its resilience and flexibility. This raises concern about its ability to adapt to the impacts of climate change, which are already manifesting themselves. The earth's temperature is changing, sea level is rising, and the flooding of sandbanks

and salt marshes will increase. With enough of its natural dynamics restored, the Wadden Sea will be better able to accommodate to accelerating sea level rise. It can even serve as a natural climate buffer, with its islands, mudflats and marshes protecting inland areas from the sea. But there is a breaking point.

If sea level rises – and the storms become more severe – then salt marshes will erode as a result of higher waves, and the mudflats that stand clear of the water at low tide will disappear. Other coastal habitats like dunes and beaches will be trapped between the fixed boundaries of the dikes or inhabited areas, and the rising sea waters ('coastal squeeze'). This will be disastrous for many coastal birds. The expected subsidence as a result of gas extraction in the Dutch part of the Wadden Sea may even speed up this process. It is important to face up to the consequences of climate change, and to become aware of necessary adaptations to protect these essential areas for birds. In order to achieve adaptation to sea level rise, all stakeholders will have to work together. The aim of maintaining an attractive Wadden Sea region with sufficient habitats for resting and breeding birds requires good spatial planning. Coastal engineering will have to play a key role: it has to ensure both the protection of people and their goods, and the protection and creation of habitats for the birds.

Pollution and shipping disasters

Birds and people need a clean and safe Wadden Sea. Since the sixties and seventies of the last century, when the rivers brought in large amounts of nutrients and toxic waste, a lot has been achieved. Yet vigilance is necessary. Levels of pollutants are slowly increasing again. A large number of substances are still exceeding safe norms, including organotin compounds, PCBs and hexachlorobenzene. An ever-present threat comes from shipping disasters, especially those involving oil tankers, as recent history demonstrates. On 29 October 1998, the freighter Pallas ran aground near the German Island of Amrum. The beaches of the islands of Amrum, Föhr and Sylt were black with oil, and 16,000 birds were killed. To prevent such disasters, the three BirdLife Partners plead for preventive measures, for instance in the area of shipping safety, and the relocation of shipping lanes. If despite these measures such a catastrophe does take place, then disaster control must be optimally equipped to limit the damage.

Hunting

Due to liberal hunting regulations, hunting is especially damaging in Denmark. Here, hunting for eider, dabbling ducks and geese is still allowed, even in EU Special Protection Areas. Hunting is also responsible for a lot of disturbance. Large hunter-free zones and corridors – so that birds can fly from the mudflats to inland areas – are crucial for the protection of migratory birds that use the Wadden Sea as a stopover site. Banning of hunting can be very effective, as is proven by the Danish restriction on curlew hunting. Soon after a complete hunting ban, curlew numbers in Denmark increased threefold, and curlews began to over-winter in increasing numbers.

The coast of the future

Bird populations of the Wadden Sea are under pressure, and an extensive set of measures is necessary to protect them. Most important is that nature must have free play again. Where possible, fixed Wadden Sea dikes should be replaced by a more natural coastline. Transitions from fresh to salt water should be gradual, recreating brackish zones. In place of overgrown, static dunes and salt marshes encroached by ditches, we would see young, evolving habitats, constantly transforming and renewing themselves. If the amount of fish and shellfish is allowed to increase at the same time, birds like knots and oystercatchers will recover again. But action is needed now.

International Flyway Approach

Conservation of migratory birds demands an international approach. Migratory birds travel large distances and have to overcome many obstacles to complete their annual cycle. For these birds, the condition of the flyway, from the breeding areas via stopover sites to the wintering grounds, is critical. BirdLife International therefore promotes a Flyway-scale approach to migratory bird conservation.

BirdLife International is active along the entire East Atlantic Flyway. Using scientific data and global criteria, the sites of highest conservation value (Important Bird Areas) have been identified. Areas in which birds concentrate during migration, and that are under pressure, are targeted for conservation action. Examples are the Wadden Sea in the

Netherlands, Germany and Denmark, Coto Doñana in Spain, Merja Zerga in Morocco, Banc d'Arguin in Mauritania and Bijagos in Guinea-Bissau.

BirdLife International Partners use an array of conservation tools to minimize the impact of the human-generated obstacles along the East Atlantic Flyway. Conservation action includes awareness programmes, policy development, site management, and legal procedures against habitat destruction and indiscriminate hunting of migratory birds. Ecological research and impact assessment is essential to direct and support the conservation actions.

It is essential for the sustainable conservation of sites and birds that conservation should be locally accepted and appreciated. BirdLife International and its Partners have developed Site Support Groups in many Important Bird Areas. Site Support Groups are groups of conservation-minded people living and working in or close to the high value conservation areas. They are important in monitoring bird populations and conditions in 'their' Important Bird Areas. The Site Support Groups play an important role in conservation action at a local scale.

Make a choice for the birds

The deterioration of the Wadden Sea demands real choices. Not just on paper, but also in daily practice and at a local level, where the economy often wins out over the environment. Conservation needs clear and strict rules that are upheld in actual practice. Many recent decisions – such as those in favour of wind farms, extensions of harbours, and gas and oil extraction – go against the interests of nature. Conservation also means good education of local people and tourists, so that everyone realises how unique the wildlife of the Wadden Sea is. Politicians, local people and tourists should be made proud of its rich bird life. It is important to show the benefits – including the economic benefits – of nature and birds.

Conquering sea level rise together

Cooperation is the key to successful conservation. At regional, national and international levels, the BirdLife organizations work together with other conservation organizations, with governments and many thousands of volunteers. It is vital that we tackle the consequences of sea-level rise, one of the main threats to the Wadden Sea, together. Climate change demands clear measures that require public support. Governments – both national and European – must take responsibility, and make a choice for nature and birds in the Wadden Sea area. If we do nothing, it could be disastrous for this unique ecosystem and the millions of birds depending on it.

Ambitious Wadden Sea conservation policy

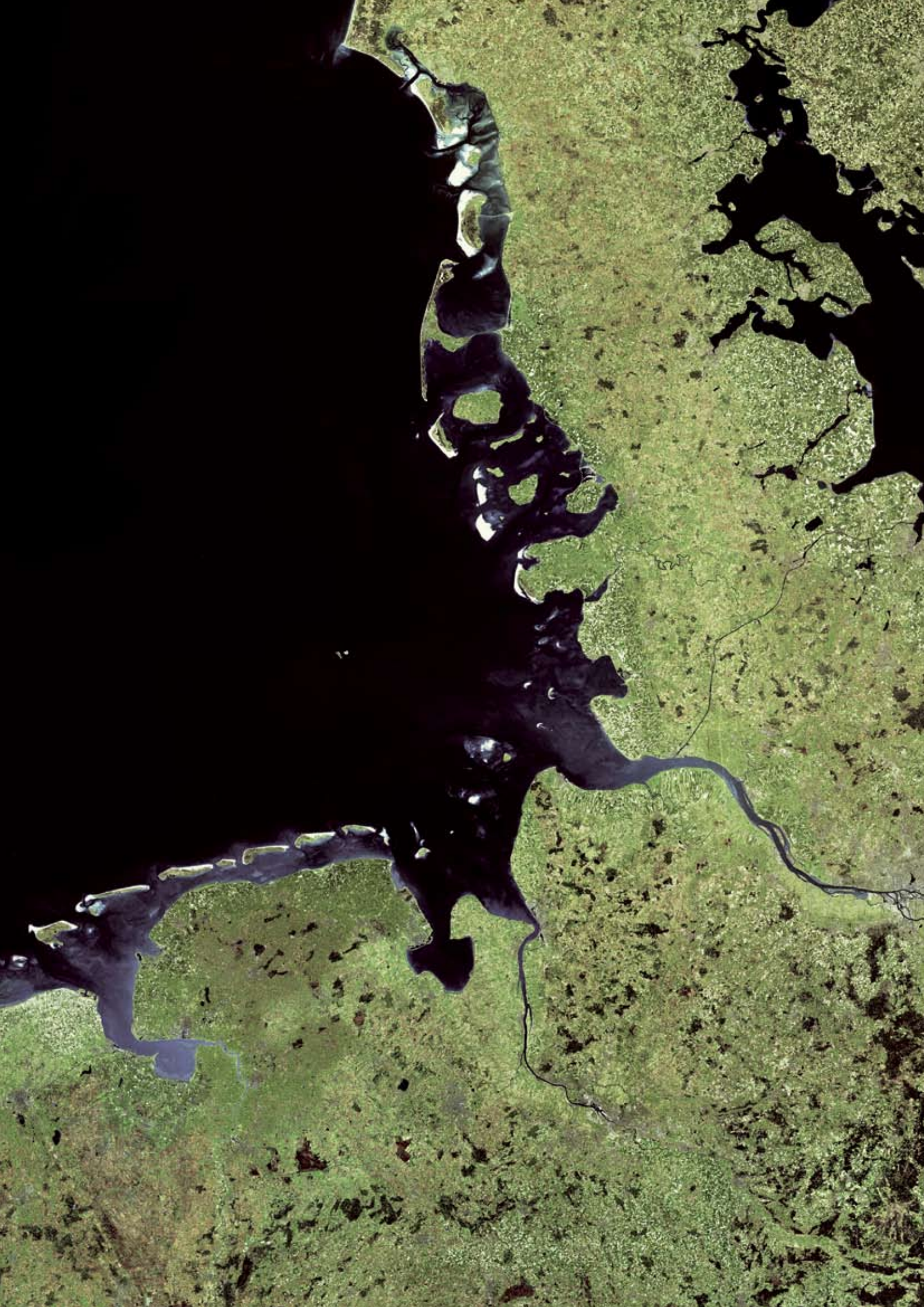
The policy to protect the Wadden Sea is clearly very ambitious. The Wadden Sea has been designated a protected natural area within Europe's Natura 2000 network. More recently, the Dutch Wadden Sea, and large parts of the German Wadden Sea, were added to UNESCO's World Heritage List. By means of the 'Joint Declaration on the Protection of the Wadden Sea', the Danish, German and Dutch governments have been working together since 1982. The German Wadden Sea area has been designated as a National Park since the eighties. The Danish mudflats will follow shortly. Parts of the Dutch Wadden Sea area have been designated as a National Park, and an ambitious nature rehabilitation programme will be carried out from 2009 onwards.

Despite the political initiatives, bird populations of the Wadden Sea are still under pressure. Together the BirdLife organizations will strive to implement the seven measures proposed in this booklet in order to protect the Wadden Sea and the millions of birds depending on it.

Conserving the Wadden Sea

The three BirdLife Partners from the Netherlands (Vogelbescherming Nederland), Germany (NABU) and Denmark (Dansk Ornitologisk Forening) call for the implementation of the following seven measures, which will ensure a biologically rich Wadden Sea, where birds and people can prosper:

1. **Provide a solid basis for the ecosystem: let natural processes have free rein to restore biological structures like the eelgrass fields and shellfish banks that support a strong food web.**
2. **Restore the unique natural landscape along the Wadden Sea coast, including salt marshes and inland pastures.**
3. **Make room for dynamic geomorphological processes on the islands. Restore the "walking" dunes, the wet dune valleys and the sea inlets.**
4. **Guarantee undisturbed breeding places and high tide refuges for birds.**
5. **Restore tidal movements in closed off estuaries.**
6. **Protect the various sites along the East Atlantic Flyway on which migrating Wadden Sea birds rely. Promote the global importance of the Wadden Sea for birds.**
7. **Take urgent measures to enable the Wadden Sea to adapt to sea level rise and other threats posed by climate change .**



BirdLife INTERNATIONAL

Working together for birds and people

BirdLife International is a global Partnership of conservation organizations that strives to conserve birds, their habitats and global biodiversity, working with people towards sustainability in the use of natural resources. The BirdLife Partnership is supported by millions of people who believe passionately that the wellbeing of our world depends on a healthy environment in which nature as well as humans can thrive. Our aim is to maintain the world's biodiversity, and specifically to maintain or increase the populations and distribution of birds and to restore and preserve the habitats they need.

For more information and the latest news on BirdLife International, visit: http://europe.birdlife.org

Born to Travel

The BirdLife Flyways Campaign

A campaign by BirdLife International to save migratory birds

www.borntotravel–campaign.com

The three BirdLife Partners of the Wadden Sea are:

Vogelbescherming NEDERLAND

www.vogelbescherming.nl

NABU

www.nabu.de

Dansk Ornitologisk Forening

www.dof.dk