

COMMON WADDEN SEA SECRETARIAT

TRILATERAL WADDEN SEA COOPERATION ANNUAL REPORT 2023



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EDITORIAL

DEAR READER

The Wadden Sea is one of the areas with the highest degree of nocturnal darkness in the whole of Europe. Everyone who has enjoyed a starry night on the dyke knows the spectacular views you can enjoy here. And yet, on that dyke you will have also noticed sources of artificial light. In the 2023 edition of the annual report, we will shed some light on artificial lights at night (ALAN).

In her lead article, Annette Krop-Benesch introduces us to research on the history of ALAN, implications for nature and humankind, and on to some solutions. We also highlight some activities on reducing ALAN here in the Wadden Sea within the newly established Trilateral Dark Sky Initiative.

In this year's "local story" we visit Anita Oosting in the Province of Groningen, who tells her company's story and solutions towards sustainability as well as her personal connection to the Wadden Sea.

The SIMP Integrated Management Plan for ONE Wadden Sea World Heritage, an overarching management document we have worked on for the past four years, was adopted in May 2023. In this issue, we look

at the SIMP's envisioned implementation strategy.

Avian influenza has had a massive impact on birds along the East Atlantic flyway. We highlight some of the actions taken at a trilateral level as well as together with our partners along the flyway.

This year, we celebrate the 20th anniversary of the International Wadden Sea School. What started out as offers for cross-border school trips is now a well-established network of Wadden Sea educators from over 70 visitor centres along the World Heritage Site's coastline and on the islands.

The Wadden Sea Youth, formed at the 2022 Trilateral Youth Conference, inform us of their recent development and activities, as well as plans for 2024.

The Danish presidency of the Trilateral Wadden Sea Cooperation started at the end of 2022. And in May 2023, the three Wadden Sea ministers signed the Wilhelmshaven Declaration, giving direction to the Cooperation for the next four years. Both the presidency and the Declaration are highlighted in this report.

In September, we had the great honour to host the fifth edition of

the UNESCO World Heritage Marine Managers Conference in Esbjerg, Denmark, and introduce the Wadden Sea World Heritage Site to colleagues from all over the world, such as from the Everglades in Florida and Komodo Islands in Indonesia. It has also been inspiring and enlightening to hear of the issues in other marine sites, sometimes not very different to ours, and learn about their solutions.

Throughout the report, we give some updates on various activities of the Trilateral Wadden Sea Cooperation, such as the research call, our new online exchange platform, activities on nature-based solutions, as well as international cooperation.

We wish you an interesting reading.



Anne-Marie Vægter Rasmussen
Chairperson of
the Wadden Sea Board



Anne-Marie Vægter Rasmussen © Miljøstyrelsen

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Night sky above the Drenkelingenhuisje on Terschelling © Raymond Kamstra

PROTECTING THE DARKNESS

WHY WE NEED TO RETHINK OUR LIGHT AT NIGHT!



Recently, scientists all over the world have switched off their torches and are studying the role of darkness in nocturnal ecosystems. They bring an alarming message: basically, all European ecosystems are suffering from increasing levels of artificial light at night, ALAN. This loss of darkness seems to play a bigger part in the biodiversity crisis than previously believed.^{1,2} We need to rethink the way we light up the night.

Whenever we think about the characteristics of a habitat, we think about temperature, water quality, or food resources. We rarely think about darkness. As a diurnal species, we mostly assess ecosystems during the day and although we know that nocturnal species exist, we rarely consider that they need a very basic thing: darkness at night. And since we usually do ecological surveys during daytime, we have not realised for a long time that this darkness is vanishing.

Chronology of light

Since the beginning of evolution, life forms have adapted to the constant rhythm of day and night and the seasonal cycle of day length. Different to many other abiotic factors, light cycles have never changed, so organisms have never had to adapt to new light levels. It is the most reliable factor for synchronising gene expression, physiology, and behaviour with the environment. In most species, sensory organs are well adapted to the light levels of their biological activity time. This adaptation is so strong that the term chronotope has been defined as a temporal equivalent to the geographical habitat.

Since the introduction of electrical light, nightscapes and the day-night-

rhythm have changed tremendously. Naturally dark nights can hardly be found in Europe.³ Worldwide, the brightness of the night sky increased by 7 to 10 % between 2011 and 2022.⁴ Since older studies measured an increase of 2-6 % each year, it can be assumed that the increase of ALAN is accelerating. This is partly due to a rebound effect, as the high energy-efficiency of LEDs results in more light output of single light points and the installation of LEDs in areas that had previously not been illuminated.^{1,5,6}

In with the tides

The Wadden Sea area is a highly rhythmic environment. Like all other ecosystems, organisms here have found their ecological niches during day or night; but in a tidal environment, biological cycles are also strongly linked with tidal and lunar rhythms. This results in very complex biological patterns which are to a high degree controlled by periodical changes of natural light.

Though the Wadden Sea is one of the darkest regions in Europe, light emissions are a threat. ALAN is mostly emitted from promenades, ports, greenhouses, and cities; but with the conversion to energy efficient LEDs, even our smaller towns have been becoming considerably brighter. The open sea is not dark either. Offshore platforms and fishing vessels are brightly lit for safety reasons or to increase fishing success.

ALAN in numbers

Moonlight has a brightness of less than 0.3 lux, while moonless nights can be far below 0.001 lux. Some organisms show behavioural or physio-

Dinoflagellates in the surface layers of the sea are responsible for the sparkling luminescence sometimes seen at night in disturbed water. © Raymond Kamstra





logical reactions to light levels below 1 lux, and changes in brightness due to moon cycles regulate activity and reproduction in many species.^{8,9} ALAN reaches 50 lux and more in close proximity to streetlights. Even in distances up to 100 kms, light levels have increased to detectable and biologically relevant levels by the city lights.¹⁰ We must therefore assume that most

parts of the Wadden Sea are affected by light pollution, and lunar cycles are outshone by ALAN.

With the conversion to LED, there is also a change in the spectral composition of ALAN. Traditionally, orange light from sodium vapour lights has been used, but white LEDs are mostly being installed now. Their light has a

higher blue content, which has been shown to have a higher impact on the majority of organisms.⁷

Effects below water

The effects of ALAN have been reported for different organisms at various trophic levels, and impacts have been identified on behaviour, physiology, health, and gene expres-

sion. Research on ALAN in marine and coastal systems is just at its beginning.^{2,9,11,12} Ecological changes start at the basic level of the global food web by altering microbial community composition and the growth rate of bacteria, algae, and plants. ALAN also effects the diel vertical migration of zooplankton, directly influencing its movement down to 200 m below the surface, but indirectly reducing carbon and nutrition transfer into deeper water levels.

Light levels are important cues for choosing a location in sessile invertebrates, and they influence activity and predatory behaviour in crustaceans, molluscs, and fish. Brightness changes during the lunar and monthly rhythms regulate reproduction, and it has been shown that ALAN inhibits spawning in some corals. So far, the influence of ALAN has only been shown for some species, but the general trend is that species composition and population size change if ALAN is introduced to an area.^{9,11,12}

Effects above water and on land

It is not only aquatic species that are affected. Approximately 10 to 12 million migratory birds pass through the Wadden Sea area, which is part of the East Atlantic flyway. Most of these birds fly at night. They share the airspace with seabirds like petrels and shearwaters. Though the reasons remain unclear, the number of bird strikes on illuminated structures is high. One study estimates that each year six million birds are killed in collisions with oil and gas platforms.¹³ Fledgling seabirds (e.g. petrels, shearwater) are especially in danger since they are attracted into coastal settle-

ments and are not able to take off from there again. Migratory bats are also attracted to light, causing them to fly energy-consuming detours or collide with man-made structures.⁹

ALAN might even interfere with the protection of dunes. Photoperiod is an important cue for plants to produce leaves and flowers. In an African fore-dune plant, promenade lighting inhibited flowering, thus reducing reproduction.¹⁴

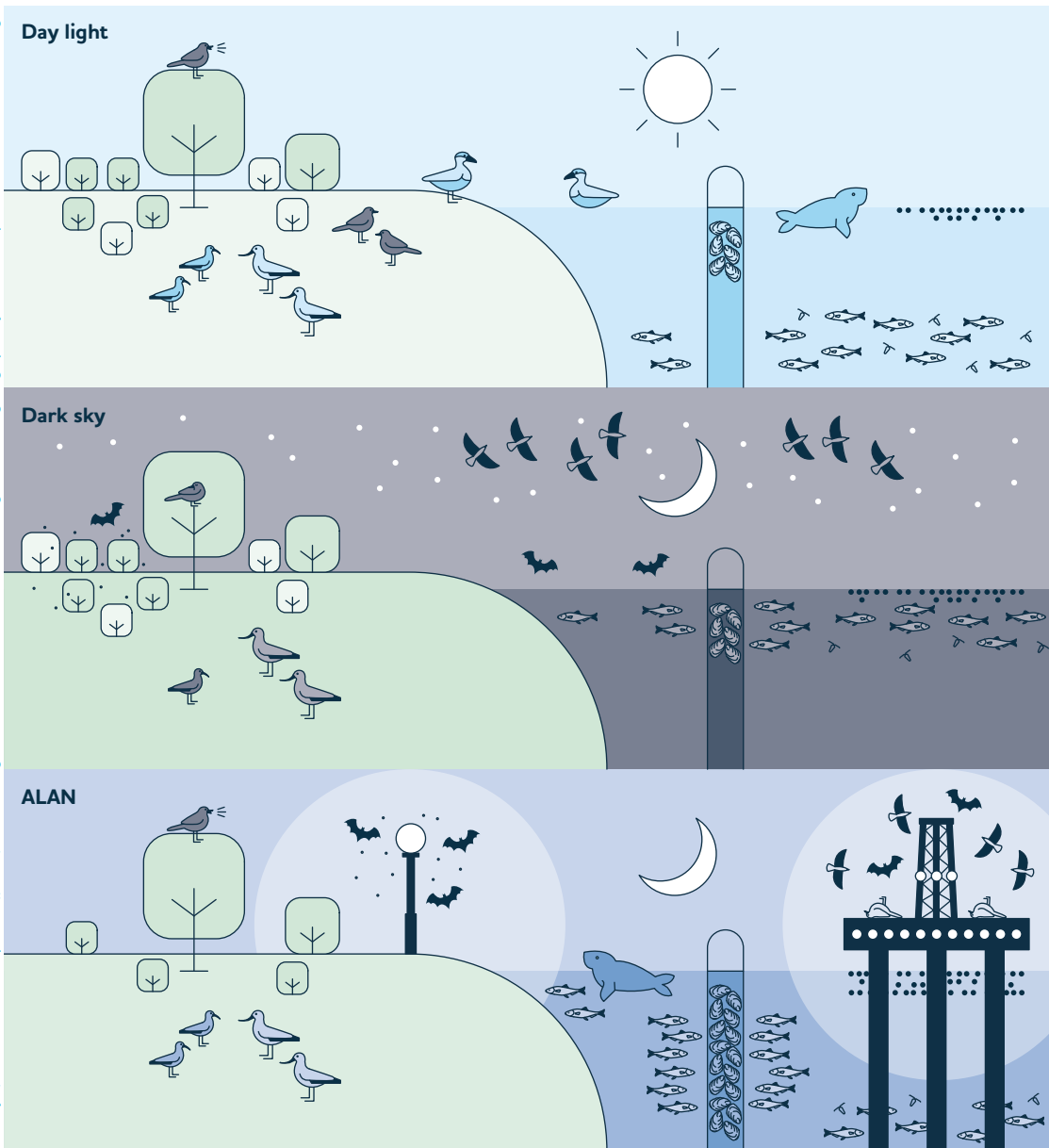
There are also organisms that might benefit from ALAN. Canadian harbour seals show increased hunting activity under illuminated bridges,¹⁵ and visually foraging waders, i.e. dunlins and plovers, extend their activity times on lit beaches.^{16,17} However, ALAN might also draw these individuals into areas with more human activities, pollution, and a higher risk of predation. It has also been shown in songbirds that extended activity times can result in increased levels of stress hormones and reduced fitness. So, in the long run ALAN might not be a real advantage for these opportunists.⁹

Addressing ALAN in the Wadden Sea

The considerable impact of ALAN has received growing attention in the Wadden Sea World Heritage Site. A detailed review of the expected ecological effects has been published by the author of this article within the frameworks of the Programme Toward A Rich Wadden Sea and the trilateral Partnership Hub.⁹ There are still many open questions about the extent of ALAN's impact on individual species, and there is a debate on how ALAN interacts with threats like climate change, brownification, chemical

Milky way, above a bioluminescent sea © Raymond Kamstra





SUMMARY OF DOCUMENTED AND EXPECTED EFFECTS OF ALAN ON ORGANISMS IN THE WADDEN SEA WORLD HERITAGE AREA

- Songbirds usually sing during the day and rest at night. With ALAN, singing is extended into the night hours and sleep is reduced. ALAN also changes bird physiology and reproduction success.
- Migratory birds rest and feed during the day and fly at night. Strong light sources at night attract birds and can cause bird strike. Migratory bats crossing the sea are also attracted to lights.
- Visually foraging waders are more active during daytime than at night. ALAN allows them to extend foraging time. Tactile foraging waders show smaller difference between day, night, and ALAN.
- Reef-building organisms like mussels and polychaetes choose the site of settlement due to light levels. With ALAN, they might settle in lower water levels than their usually habitat.
- Starting with dusk, zooplankton, and small fish ascend from lower water levels to the surface to feed on phytoplankton. ALAN suppresses this diel vertical migration, reducing the transport of biomass to lower water levels. Phytoplankton biomass might increase due to extended photosynthesis.
- Visually foraging fish, especially bigger species, are active, some smaller fish stay in lower water levels. ALAN increases fish activity during the night, increasing feeding pressure on prey species like reef organisms, but also increasing predation risk on smaller fish. Many fish species aggregate in the light, and harbour seals use this light for hunting.
- At night, moths and other nocturnal insects pollinate plants. ALAN draws these insects to light sources where many of them die, partly due to increased predation by bats. Consequently, pollination is reduced. ALAN also interferes with insect physiology and reproduction.
- Plants use daylength to control seasonal rhythms, i.e. shedding of leaves. Trees under influence of ALAN keep green leaves until late autumn.
- As a consequence, ALAN can lower the density of dune-forming plants.



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ANNETTE KROP-BENESCH

*Dr. Annette Krop-Benesch is a **chronobiologist and independent science communicator, author, and consultant on the ecological and health impacts of ALAN**, based near Darmstadt, Germany. She works with NGOs, research groups, companies, communities, light planners, and lighting manufacturers **to raise awareness of the dark side of artificial light and to create more sustainable lighting solutions**. She is author of the Report on the **Influence of Artificial Light at Night (ALAN) on the Outstanding Universal Value (OUV) of the Wadden Sea World Heritage**.*

pollution, etc. Nonetheless, there is enough reason to rethink our use of artificial light. Thus, the KID project is currently developing a system to reliably measure light pollution in the region. The DARKER SKY project aims at reducing light pollution to protect biodiversity and maintain dark corridors throughout the region. However, this is not an easy task, though supported by committed partners.

ALAN and us

Light is generally seen as an advantage and a sign of a high standard of living. We also connect it with safety. Therefore, many communities are reluctant to reduce ALAN. But in addition to the ecological and energy costs, there is growing evidence that too much light causes considerable harm to us humans too: brightly lit areas have higher rates of people with sleep problems, depression, being overweight, and hormonal cancers.¹⁸ It is unclear what mechanisms are at work here, but it is possible that light acts as stressor similar to noise, which could explain most health issues correlated to ALAN.

There is also a cultural aspect to consider. Humankind has a long-lasting relationship with stars and the night sky. Although most people do not use stars for time measuring and navigation anymore, we associate them with inspiration, hope, and awe. Astro-tourism is a growing branch, especially in nature protected areas.¹⁹ There is a growing number of Dark Sky Parks worldwide, including Boschplaat and Lauwersmeer in the Netherlands, and Spiekeroog and Pellworm in Germany. Should nocturnal light emissions increase at the

current rate, the Wadden Sea World Heritage area will lose its access to the oldest cultural world heritage, the starry night sky.

Where to reduce ALAN

Since marine organisms react to very low light levels, ALAN should be reduced to places where it is necessary for safety. Despite an often voiced believe, safety does not increase with the amount of light.²⁰ Instead, safety in public and private places can be achieved with surprisingly low light levels, if the light is well directed. There is also growing evidence that warm lights increase the perception of safety and a feeling of comfort.²¹ Places that are not used by people at night should not be illuminated at all. If a place is used infrequently, adaptive light with motion detectors can provide light for orientation if needed and preserve darkness at other times.


If light at night is necessary, light levels should be kept at the necessary minimum and light should be focused on the areas that need to be illuminated. Luminaires should be shielded to avoid light emissions above the horizon. This is also in the interest of human users since it reduces glare and improves visibility of the surroundings. This also reduces energy consumption.

The right light

A slight conflict arises when choosing the right spectrum of light. The energy efficiency of LEDs roughly increases with the blue content, but this cold, blue-rich light attracts more insects than warmer light (orange, red). Red light also attracts fewer birds than white, blue, or green light, so the use of orange lights can reduce

bird strikes. Another option is the use of flashing lights, or to switch on the lights only if a plane or ship is entering the proximity of a platform or windmill. Light-shy bat species are more tolerant of red light, with less changes in their flying patterns. Last but not least, the circadian system, which is synchronised by light, is more sensitive to blue light than to long wavelengths.⁹

The lighting industry is reacting to these facts by producing LEDs with lower blue content, but also with acceptable energy consumption and colour rendering. Consequently, the light source with the lowest acceptable blue content should be chosen, even if the energy efficiency of this light source might be lower. Especially in ecological sensitive areas, direct protection of the local fauna and flora should have higher priority than energy savings; also, total energy consumption of a lighting installation can be significantly reduced through good light planning.

In the end, we need to find a balance between the needs of human civilization and the protection of as much natural darkness as possible since this is an important characteristic of every ecosystem, especially in a tidal flat system. It might help to show some courage and get acquainted with darkness again. We might be in for an amazing surprise, including an awe-inspiring, priceless starlit night sky. 

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DARK SKY INITIATIVE

(NET)WORKING TOGETHER ON LIGHT POLLUTION REDUCTION

Since its start in 2019, the Trilateral Dark Sky Initiative has evolved into a diverse coalition of stakeholders, including nature management organisations, individuals, NGOs, research institutes, and municipalities. The trilateral approach plays a pivotal role in facilitating the exchange of knowledge aimed at addressing the pervasive challenge of light pollution.

The shared mission of the network: combat light pollution, a pressing issue with far-reaching implications. The initiative follows the objective of reducing the impact of Artificial Light at Night (ALAN) on the environment,

thereby creating enhanced opportunities for stargazing, improving human well-being, as well as significant energy saving.

Fundamental aspects of this mission are to raise awareness and promote education about the importance of preserving natural darkness. These are essential elements in establishing a transnational and cross-sectoral framework which enhances the shared commitment of preserving nocturnal darkness for the benefit of both nature and humankind, while also emphasizing the importance of spreading knowledge and understanding about this critical endeavour.

The Trilateral Dark Sky Initiative operates within the framework of the Partnership Hub, coordinated by the Common Wadden Sea Secretariat.

<https://exchange.waddensea-worldheritage.org/node/35>

TRILATERAL DARK SKY VISION

At the 14th Trilateral Governmental Conference in November 2022, over 40 representatives from the three countries signed the “**Trilateral Dark Sky Vision over the Wadden Sea**” – A sign that the importance of **natural darkness is more and more acknowledged as one of the processes** that should proceed undisturbed in the Wadden Sea World Heritage Site.

The Vision is intended to guide and further strengthen our combined efforts to preserve nocturnal darkness and enjoy starry skies in the Wadden Sea Region through awareness raising, stakeholder engagement, sharing of best practices, supporting the development of policies, knowledge, and monitoring activities.

www.waddensea-worldheritage.org/node/2026

EDUCATIONAL ACTIVITIES AND EXPERIENCE OFFERS

Visitor centres, private tour guides, and scientific organisations and initiatives throughout the Wadden Sea provide a broad choice of nighttime experiences for all ages. In the framework of the **Partnership Hub, the International Wadden Sea School and the Trilateral Dark Sky Initiative** put together a collection of offers to give a glimpse into **the world of the nightly Wadden experience**. It is by no means complete and meant only a snapshot. Yet, it shows the broad scope of already existing activities and offers **inspiration to exchange ideas, cooperate, and co-create new offers** for visitors and locals to respectfully experience nature’s fascinating nightlife and take in the value of darkness.

www.waddensea-worldheritage.org/node/2093

DARKER SKY


REDUCING LIGHT POLLUTION IN THE WADDEN AND NORTH SEA REGIONS

Proper reduction of light pollution and biodiversity protection calls for transnational exchange and cross-sectoral management. Developed within the framework of the Trilateral Dark Sky Initiative, the Interreg North Sea DARKER SKY aims to reduce light pollution in the North Sea Region and contribute to the preservation of biodiversity and dark ecological corridors in a transnational and cross-sectoral approach.

Among other things, DARKER SKY will provide municipalities and ports with innovative measuring, monitoring and co-design methods for the implementation of new light reduc-

tion solutions. The project will further foster interdisciplinary transnational exchange with good practice and lighthouse demonstrator sites on environmentally-sound lighting techniques and systems at eight sites in the pilot regions of Brest, Groningen, Friesland, Lower Saxony, and Hamburg. DARKER SKY will also support dialogue between local, regional, and national public authorities to develop specific regional action plans and a transnational strategy for a sustainable policy uptake of light reduction solutions across the North Sea Region.

The project supports the efforts of geographically scattered regions

and initiatives through best practice exchange and co-creation. It adds to previous activities of the Trilateral Dark Sky Initiative and directly supports the implementation of the 2023 Wilhelmshaven Declaration, as well as the Trilateral Vision on Dark Sky. Within the project, CWSS seeks to identify synergies between the project and other initiatives and networks, and it will coordinate the development of a transnational strategy on reducing light pollution. 

www.interregnorthsea.eu/darker-sky

PROJECT CONSORTIUM

- Université de Bretagne Occidentale (FR, lead partner),
- Brest Métropole (FR),
- Common Wadden Sea Secretariat (DK, DE, NL),
- Freie und Hansestadt Hamburg -Bezirksamt Altona (DE),
- Hochschule für Angewandte Wissenschaften Hamburg (DE),
- Landmakers Coöperatie U.A. (NL),
- Gemeente Heerenveen (NL),
- Stichting Van Hall Larenstein (NL),
- Carl von Ossietzky Universität Oldenburg (DE),
- Nationalparkverwaltung Niedersächsisches Wattenmeer (DE),
- Niedersachsen Ports GmbH + Co. KG (DE),
- Rijksuniversiteit Groningen (NL),
- Aarhus Universitet (DK),
- Esbjerg Kommune (DK).

PROJECT FACTS

- Interreg North Sea Programme - Programme Priority 3 'A Climate Resilient North Sea Region'
- Project period: 2023-2026
- Project budget: € 4,216,620 (€ 2,529,972 granted by ERDF)



Interreg North Sea  Co-funded by the European Union

DARKER SKY

THE KID PROJECT

MEASURING LIGHT POLLUTION

The Wadden Sea is one of the darkest sites in Europe. Yet, its nature is increasingly affected by the proximity of cities. To combat this, it is crucial that light pollution is monitored. Since 2011, the VIIRS instrument on the SUOMI satellite has been monitoring the Earth, providing daily light pollution maps. However, the measurements are not precise at low levels due to weather effects and they do not measure blue wavelengths, the impact of which is particularly strong and has increased considerably in the last years due to LED lighting. The Interreg North Sea Small Project Keep it Dark (KID) addresses those shortcomings.

In KID, a consortium of the Universities of Groningen, Oldenburg, and Aarhus is developing a robust system to monitor light pollution, crucial for the conservation and management of the Wadden Sea region, which was also underlined in the Leeuwarden Declaration. This monitoring system is envisioned to accurately keep track of the total amount of light at night, but also measure factors such as the

colour of the light and light near the horizon.

The KID partners are seeking the optimal combination of a variety of techniques: from satellite data to ground-based instrumentation. KID's monitoring will be of great importance when it comes to understanding the impacts of light on the sea, land, and air of the region, and will also provide valuable input for administrators as they work towards a sustainable future. The Wadden Sea Region is uniquely positioned for this study, containing a mix of rural and urban, agricultural, and industrial settings. The site stretches across a range of local, regional, and national administrations. While KID focusses on this area, the developed strategies will be transferable to other sites.


Measurement strategies

The strategy applied in KID is to develop detector stations in dark and bright places in various locations across the Wadden Sea region. The researchers will compare the different devices to establish the reliability of

the measurements, while connecting results to ecological needs. Several detectors, cameras, and spectrometers will be tested at each station. The data are calibrated using measurements of bright stars, which are well-known in literature.

The simplest instrument used is a Sky Quality Meter (SQM). The partners have set up a network (washetdonker.nl) displaying the measurements from these devices in many places in the Netherlands and Germany. These measurements are taken every minute in green light. KID investigates the accuracy of these instruments. In addition, wide-field cameras are used, which can access the light in RGB and are more complicated instruments; they take images of the entire sky every few minutes in red, green, and blue. The project partners are trying to determine the best way of getting robust sky brightness measurements from these images. Since these instruments are just measuring the sky from one position, the partners are also exploring whether the results can be combined

with the maps of the VIIRS satellite, to make the map reliable in a larger region.

The final product of KID will be guidelines on monitoring accuracy of sky brightness in a colour of choice, to be applied by organisations, nature conservationists, or public servants who want to investigate how light pollution is evolving on a local scale. The findings will be presented at the international "Eurodark" conference on 14-16 March 2024 in Groningen, Netherlands. 

www.interregnorthsea.eu/kid

PROJECT CONSORTIUM

- *Rijksuniversiteit Groningen (NL, lead partner),*
- *Aarhus University (DK),*
- *Carl von Ossietzky Universität Oldenburg (DE).*

PROJECT FACTS

- *Interreg North Sea Small Project - Programme Priority 3 'A Climate Resilient North Sea Region'*
- *Project period: 2022-2024*
- *Project budget: € 462,499 (€ 277,499 granted by ERDF)*

  Co-funded by the European Union

KID

Milky way spanning across the sky above dunes with artificially illuminated structure in the back © Raymond Kamstra



A LOCAL STORY

ANITA OOSTING

Meet one of the first Dutch Wadden Sea Ambassadors. In the past 30 years, Anita Oosting and her family have transformed their farm Lentemaheerd in the Groningen province into a bed and breakfast and campsite with 25 camping spots, seven B&B rooms and two rental properties. Anita shares her passion for her home, the Wadden Sea, and sustainability with other business owners in the Dutch Wadden Sea Ambassador Programme. The programme was launched in the framework of Interreg project PROWAD Link and has grown to 60 members in the Dutch Wadden Sea area.

Where did you start, where are you now?

I was born here and during childhood, the Wadden Sea didn't hold any particular significance to us. It was just part of my home. This changed over the years, especially when we started welcoming guests in the 1990s. In this flat and remote region, the idea of having visitors seemed unusual. I remember my father-in-law being particularly sceptical that anyone would want to come. But many people choose to visit us for the fresh air and calmness of the Wadden Sea region. With time, we embraced the area's uniqueness more and more – the

Wadden Sea as a World Heritage Site, its open space and tranquillity. Our cultural heritage was also shaped by the Wadden Sea. For example, our guests are fascinated by the terps in our area or by the fact that in the 1800s the dike bordering the North Sea was just next to our farm.

How is the Wadden Sea connected to your business?

Lentemaheerd is the northernmost mainland campsite in the Netherlands. We regard the area around us as our unique selling point: here you can enjoy wide-open skies and a darkness that's hard to find elsewhere thanks to the Wadden Sea and the way it also shaped the land behind the dikes. Guests can bike or walk along the Wadden Sea, take a mudflat tour, or visit the island of Borkum. The Wadden Sea's status as a World Heritage Site is among the reasons people visit.

Why did you decide to become a Wadden Sea Ambassador? What is the added value of the programme for your business?

We joined the first group to develop the programme before the pandemic, which put a halt to our activities. Afterwards, it wasn't that easy to get everyone back together. A course was then offered to people who work

Wadden Sea Ambassador Anita Oosting in front of her family home © VisitWadden



“The Wadden Sea gives me freedom. When I need to free my mind, I sit on the dike and take in the open space of nothing, wind, and birds”



AMBASSADOR PROGRAMME



The Wadden Sea Ambassador Programme is a new regional partnership programme for entrepreneurs in the Dutch Wadden Sea area who have completed a two-day training. With the help of a green checklist, they demonstrate that they are taking sustainable steps in their business operations. The first 20 Ambassadors, among them Lentemaheerd, signed in June 2022.

At the 14th Trilateral Governmental Conference in Wilhelmshaven in November 2022, the Ambassador Programme as well as the German and Danish Wadden Sea National Park Partner Programmes became signatories to the Memorandum of Understanding (MoU) forming the strategic, multi-stakeholder “Trilateral Partnership in support of the UNESCO Wadden Sea World Heritage” (in short: Trilateral WH Partnership). www.visitwadden.nl/nl/ambassadeur

with tourists, to learn more about the Wadden Sea. My son, my daughter-in-law, and I participated and became one of the first ambassadors. Sure, we were born here, but there's still much to discover. For example, I have lived here for 60 years, and I had never been to Paesens-Moddergat, close to Lauwersoog National Park – until the programme offered a visit. Now, it's

one of the places I highly recommend to my guests. Some information was familiar, but we have not yet thought about highlighting them to our guests. Rediscovering those is truly beneficial.

I also take a lot from the network we are part of. It is nice to meet colleagues who share similar sentiments and perspectives about this region. We


gather twice a year to network, share experiences, learn, and grow together.

How do you give back to the Wadden Sea?

Besides telling our guests the story of the Wadden Sea, we're dedicated to using eco-friendly and sustainable solutions in our business. We have solar panels on our roofs and use geothermal heating for our B&B. We aim to only use renewable energy. In our kitchen, we prefer organic and local products – and we only offer juices from our own farm-grown fruits. We share with our guests where their breakfast comes from.

It makes me sad when I see guests wasting food. Living in an agricultural area, I know how much work goes into making it and how much climate change affects farmers. I feel like some people don't think about food being limited. They might throw away a whole loaf instead of taking it home, and that's sad. We need more respect for how food is made. At breakfast, we limit portions to reduce our food waste. We are happy to provide more, of course. But if we continuously, endlessly provide everything, we would ultimately waste a lot of food. Some people understand, but not everyone does. We hope to help people value food more and reduce waste. Not just for the Wadden Sea, but for our planet.

What does the Wadden Sea mean to you personally?

The Wadden Sea gives me freedom. When I need to free my mind, I sit on the dike and take in the open space of nothing, wind, and birds. I encourage my guests to do the same. After a while, they embrace the silence and the wide horizon. 



The Lentemaheerd farm from above © Lentemaheerd

NAVIGATING THE FUTURE

TOWARDS A ROADMAP FOR PRESERVING THE WADDEN SEA WORLD HERITAGE SITE

In May 2023, “The SIMP Integrated Management Plan for ONE Wadden Sea World Heritage” was successfully adopted. The SIMPlementation Strategy (from “SIMP” and “implementation”) is aimed at utilising the new plan as an effective tool for strategic decision-making. It presents principles to support a good collaboration in the adaptive implementation of the SIMP.

The strategy adopts a proactive and collaborative approach to the management of the Wadden Sea, addressing a range of pressures, including cumulative impacts. The SIMPlementation Strategy’s main objective is to operationalise SIMP activities, such as bolstering climate change adaptation and mitigation efforts, and enhancing complementary endeavours such as scientific research, monitoring, education, and collaboration. Its roadmap follows

a step-by-step approach, allowing for gradual progress, active participation, and necessary adaptations. It builds upon existing plans and frameworks, ensuring coherence and coordination among diverse Wadden Sea groups and stakeholders. The Common Wadden Sea Secretariat (CWSS) is responsible for administering and coordinating the implementation, maintaining an overview of the activities, and facilitating collaboration. Whenever possible, relevant bodies within the Trilateral Wadden Sea Cooperation (TWSC) are entrusted with the implementation of activities, while official groups handle legal requirements.

“A coordinated approach is crucial to the SIMPlementation strategy’s success”, says Soledad Luna, Programme Officer Wadden Sea World Heritage at CWSS. “By integrating the SIMP into the agenda of all TWSC’s and CWSS’s

work, we seek to foster collaboration, synergy, and interdisciplinary research. Further, the Partnership Hub approach can help coordinate and communicate effectively with partners beyond the TWSC involved in projects supporting SIMP activities. The exchange platform, workshops and joint initiatives are viable tools to support collaboration.”

The effectiveness of SIMP activities further relies on prioritising the strategic tasks and progressing step-by-step. Next to CWSS, the trilateral Task Group Management is tasked with coordinating the implementation process.

Regular reflection, in the form of progress reports, will play a vital role in monitoring and tracking the SIMPlementation’s development and SIMP activities. The Task Group Management and CWSS assume the responsibility of

gathering progress information, generating reports, and diligently preparing a cumulative progress report ahead of the next Trilateral Governmental Conference planned for 2026. This comprehensive report aims to emphasise the priorities derived from the SIMPlementation process, which will be incorporated into the forthcoming Ministerial Declaration.

The proper allocation of resources is equally important. In addition to efficient resource allocation within the TWSC, seeking co-funding from EU projects will help to address specific resource requirements for activities, ensuring financial sustainability. Expectations and risk management are important aspects of the SIMPlementation. Thus, Luna sees clear communication, distribution of responsibilities, and realistic expectations as crucial. “We make plans to

reduce the possibility of failure and frustration. With shared responsibilities and support throughout all phases of activities, we have created a proper basis for success.”

SIMPLEMATION OPERATIONAL FRAMEWORK

STEP-BY-STEP APPROACH

Gradual progress, allow for participation and adaptation.

USE OF EXISTING TOOLS

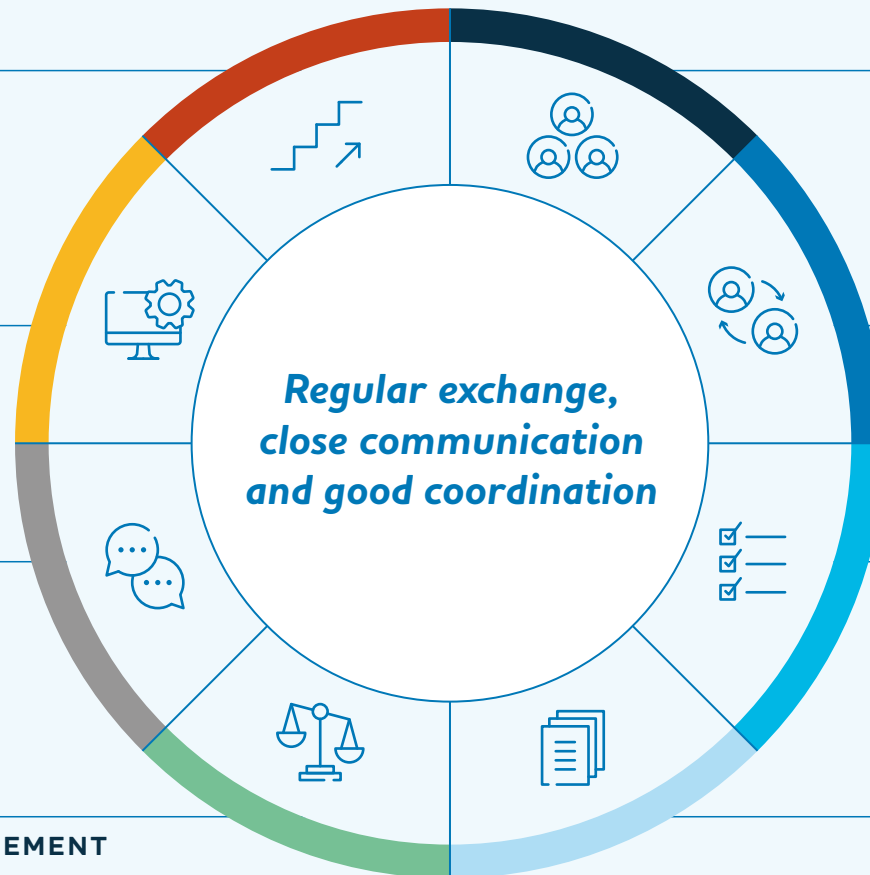
Build on, enhance the use of existing plans, strategies and frameworks.

ACTIVITIES

Complement each other as much as possible to pool resources together and use synergies.

EXPECTATIONS AND RISK MANAGEMENT

Implementation by TWSC and stakeholders.
Clarity in who-does-what and decision making process.



AGILE SETUP FOR WORKING ON THE SIMPLEMENTATION

CWSS and trilateral group. Using existing TWSC bodies and in collaboration with stakeholders.

COORDINATED APPROACH

SIMPLEMENTATION is in the work plans of all TWSC bodies.

RESOURCES

Strategic prioritisation. Resources and capacities dedicated by TWSC and the involved stakeholders.

PROGRESS REPORTS

Regular reporting to allow for budget planning and adjustment of activities

AVIAN FLU AND SANDWICH TERNS

EXPERTS FORMULATE MANAGEMENT GUIDELINES

A sandwich tern colony in the salt marshes in Lower Saxony © NLPV/ Florian Packmor

“H5N1 has become a global problem, threatening the survival of millions of waterbirds and many countries’ economic potential”



In the last two years, avian flu (highly pathogenic avian influenza, H5N1) has spread across globe, reaching areas where it has never been detected before, with devastating consequences for many waterbird populations. After the shocking outbreak among sandwich terns in 2022, partners in the Wadden Sea were left wondering how to prepare for the return of the breeding birds.

To better understand the transmission routes of the virus and to discuss possible management options, the Common Wadden Sea Secretariat (CWSS) and the National Park Authority “Niedersächsisches Wattenmeer”, under the lead of the Friedrich Loeffler Institute, organised an ecological joint risk assessment. Experts from different disciplines, namely virology, epidemiology, veterinary science, ornithology, and conservation management, from all three Wadden Sea countries and the UK, met for a three-day workshop in Wilhelmshaven, Germany. Risk factors for the entry and exposure of sandwich tern colonies in the Wadden Sea to the virus were identified and assessed. Different entry routes were examined: interactions with other wild bird species, interactions with the poultry sectors and exposure through environmental substrates. For risk factors identified as high to very high risk, management measures such as close monitoring of breeding sites and the early removal of carcasses were discussed and published in [management guidelines](#) for the Wadden Sea.

With the start of the breeding season 2023, a new version of the virus started circulating in the Wadden

Sea, with high impacts on gulls. Thus, initially mainly dead black-headed gulls were found in the colonies. Later, die-offs in the immune-naïve chicks of the sandwich terns were observed. As the risk associated with specific factors is partly depending on the behaviour of the species affected, immediate action was taken, and the risk assessment adjusted for black-headed gulls. In contrast to sandwich terns, this species moves further inland and is known to scavenge and occur at public feeding sites. The necessity for strict adherence to biosafety protocols in the poultry industry was therefore reiterated and the ban of public feeding recommended.

Further south on the East Atlantic Flyway, in West Africa, outbreaks among colonially breeding waterbirds were also reported in spring 2023. In The Gambia, Royal terns and Caspian terns had been the most affected species, but deaths were also reported for sandwich terns and common terns. The local authorities took immediate action by starting to collect carcasses and informing local communities about the risk associated with sick and dead birds.

To further support the ongoing initiatives and help prepare the country for the arrival of thousands of migratory waterbirds that may carry the virus, CWSS’s Kristine Meise as part of her work for the Wadden Sea Flyway Initiative went to The Gambia on a joint mission with the German Society for International Co-operation (GIZ), the Friedrich Loeffler Institute and the Robert Koch Institute. The mission was organised by the German Epidemic Preparedness Team (SEEG),

managed by GIZ. The mission consisted of three elements: a Joint Risk Assessment with partners from different sectors and government departments; a ranger training on management options and the need for use of proper personal protection amid an outbreak and a laboratory training for the identification of the virus.

“H5N1 has become a global problem, threatening the survival of millions of waterbirds and many countries’ economic potential, especially in the poultry sector”, says Meise. “Exchanging information and helping partners to prepare for future outbreaks is key in our attempts to manage the impact of the virus.”



Decayed sandwich terns © NLPW/ Gundolf Reichert

MANABAS COAST

NEW INTERREG PROJECT LOOKS AT COASTAL NATURE-BASED SOLUTIONS

It has become evident that we are exceeding the planet's ecological limits as climate change increasingly places the natural world and humanity in peril, from rising sea levels, more frequent and severe weather events, and increasing temperatures. The challenge of adapting to the potential impacts of climate change is a significant concern for the Trilateral Wadden Sea Cooperation (TWSC). The cooperation is actively working towards establishing a climate-resilient North Sea Region by implementing coordinated trilateral policies aimed at enhancing the resilience of the Wadden Sea ecosystem to climate change impacts. This effort is particularly important considering the

Outstanding Universal Value (OUV) of the Wadden Sea World Heritage Site. In the framework of the new Interreg project MANABAS COAST, the Common Wadden Sea Secretariat (CWSS) will engage with coastal sites in Belgium, France, the Netherlands, and Sweden.

The MANABAS COAST project, short for "MAInstreaming NAture BAseD Solutions through COASTal systems", emerges as a promising initiative that aims to mainstream nature-based solutions in the North Sea Region by developing a framework, tools, guidelines based on pilot projects. To achieve sustainable development and effectively mitigate the risks associa-

ted with climate change, it is essential to integrate Flood and Coastal Erosion Risk Management strategies with biodiversity objectives. Nature-based Solutions (NbS) have garnered attention as a sustainable approach that uses nature to provide effective solutions. Unlike traditional methods, NbS endeavors to restore, enhance, and safeguard ecosystems, offering numerous benefits such as reduced flooding and erosion risks, improved water quality, and enhanced biodiversity conservation.

The project's comprehensive framework, encompassing policy and decision making, technological knowledge, capacity building, and a

multi-stakeholder approach, provides a strong basis for implementing these nature-based solutions in the North Sea Region. The success of the project relies on the commitment and collaboration of stakeholders, from diverse sectors, working together to adapt and implement sustainable solutions.

CWSS will serve as a conduit for knowledge exchange and collaboration between MANABAS COAST and trilateral entities. Notably, the project will establish a robust partnership with the Expert Group Climate Change Adaptation (EG-C) of the Trilateral Wadden Sea Cooperation, comprising esteemed authorities, responsible for coastal protection and nature con-

servation from Denmark, Germany, and the Netherlands, along with key non-governmental stakeholders. Furthermore, CWSS will establish vital links with additional marine World Heritage Sites and the acclaimed World Heritage Marine Programme, fostering a network of engagement and cooperation.

www.interregnorthsea.eu/manabas-coast

Interreg North Sea  Co-funded by the European Union

MANABAS COAST

UNDERSTANDING COMPLEX PRESSURES

FIRST TRANSBOUNDARY WADDEN SEA RESEARCH CALL CONDUCTED

From April to July 2023, the Dutch Research Council (NWO), the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), and the Federal Ministry of Education and Research (BMBF) opened the Dutch-German research call 'Understanding complex pressures on the Wadden Sea and options for action'.

Aimed at protecting and preserving the Wadden Sea's Outstanding Universal Value, the call focused on interdisciplinary research that creates knowledge with and for stakeholders and emphasises the importance of societal impact. A maximum of €16

million is available for the research programme. The institutions received a number of submissions that were under review as the annual report was printed.

The research call was developed with the support of the Trilateral Programming Committee Wadden Sea Research (TPC-WSR) and the Common Wadden Sea Secretariat (CWSS). TPC-WSR consists of representatives from science and policy of the three states and was chaired by Dr Bernd Scherer. It was installed by the Wadden Sea Board (WSB) to serve as a focal point to foster scientific cooperation and applied research on the Wadden Sea World Heritage,

and for discussions on how to implement, further develop and link a joint research programme to other relevant national and international initiatives, considering the [Trilateral Research Agenda \(TRA\)](#).

Tidal creek winding through sandflats and tidal marshes © CWSS/ Sten Wendling



EXCHANGE PLATFORM

**NEW VIRTUAL
MEETING SPOT
ENHANCES
TRANSBOUNDARY
COOPERATION**



Cooperating beyond borders gives new impulses and inspiration for home. As a new means to the cooperation of stakeholders in the Wadden Sea area, the Common Wadden Sea Secretariat (CWSS), in the framework of Interreg project “PROWAD Link”, created an online exchange platform. The **Wadden Sea World Heritage Exchange Platform** offers a space, where new ideas can be exchanged, developed, and brought to life. All Wadden Sea stakeholders are invited.

The new virtual space offers a stage to initiatives and projects towards the conservation of the Wadden Sea World Heritage Site and sustainable development of its bordering regions. Its primary purpose is to function as a gateway for fostering connections with like-minded individuals and organisations through interactive groups. The platform also gives access to essential information for stakeholders on how to actively participate in preserving the Wadden Sea. Upon visiting the site, users can experience two levels of engagement. For the public, the platform showcases various networks, activities, news updates, individuals, and resources that have been granted general visibility. Registered users can additionally log in to a restricted area, where all entries, public or not, can be viewed. Additionally, the registered user has access to the interactive “groups” section, follow groups, activities, and networks of interest, and edit and publish their own profile to become a visible stakeholder of the Wadden Sea.

The platform is open for stakeholders of the Wadden Sea area, invested

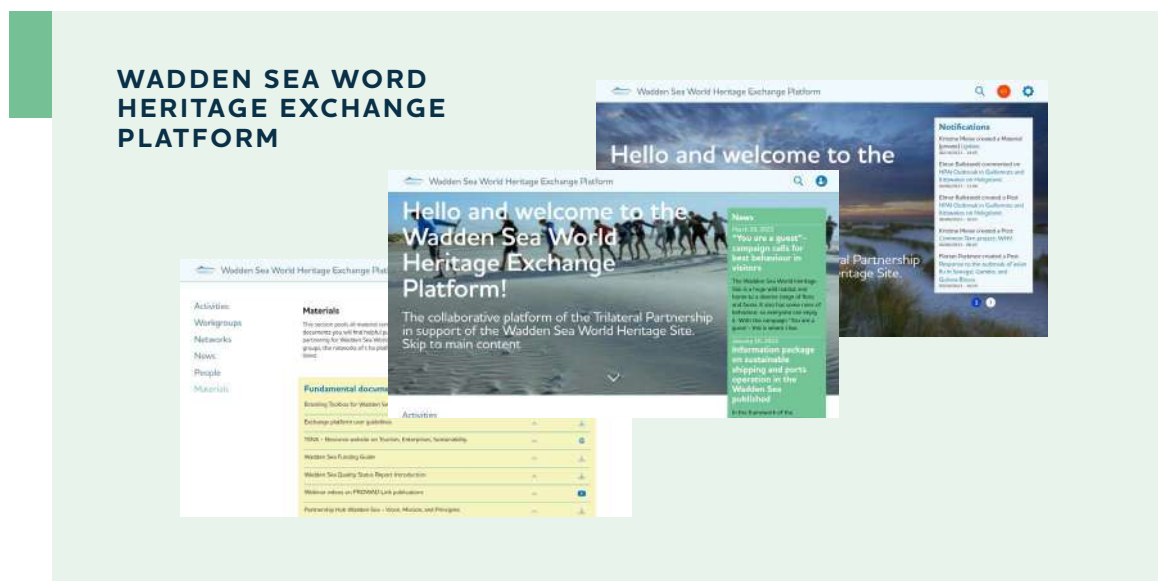
in the protection of the Wadden Sea World Heritage Site. Those include public authorities, environmental NGOs, partner networks, visitor centres, the research sector, the sustainable tourism sector, and businesses. To become registered users and fully experience the platform’s functions, interested parties can reach out to CWSS at exchange@waddensea-secretariat.org. An online form is soon to be added to the site. As a virtual space of the trilateral Partnership Hub, the new site promotes cross-sectoral and cross-border cooperation to support the notion that the Wadden Sea is one transboundary entity that belongs to and thereby is the responsibility of all.

Visibility, knowledge exchange, networking

The platform works in three main categories: networks, activities, and workgroups, depending on the scale of action. In the “networks” section, long-term networks addressing specific topics of the Wadden Sea are displayed. Networks can be clearly defined, such as the International Wadden Sea School as a network of Wadden Sea visitor centres. Or they can be loosely based nets on specific themes, such as the Community of Understanding on Sediment Solutions. Suggestions of new networks can be made to CWSS directly.

Under “activities” there are short-term projects, lasting from a few months to a couple of years. A prominent example would be the recently started Interreg project “DARKER SKY”. Here, Wadden Sea stakeholders, as per request to CWSS, can add profiles of their projects with links to

WADDEN SEA WORD HERITAGE EXCHANGE PLATFORM



their respective project pages or use an extended activities element to have their project’s main online representation on the trilateral platform.

While networks and activities can also be made visible to the unregistered user, the “workgroups” section is reserved solely for registered users. Workgroups serve as the platform’s medium for direct interaction among users. Within a workgroup, members can engage in discussions, add comments, and share documents to the chat. Every registered user can independently create a workgroup on any Wadden Sea-related theme and invite other users to join the conversation. The creator of the group automatically becomes its moderator. Groups can be affiliated with activities or networks.

Registered users can enhance their visibility by publishing their profile to people who are not registered. This can be done by a simple box check in the user profile. This function widens the reach of potential new contacts and partners.

Lastly, the site features a document library with guidelines, research, and good practice examples, available to all users. In addition, this section lists all documents of the groups a user is a member of as well as documents uploaded by the user.

A handbook, available under “materials” and sent out with the user registration confirmation e-mail, summarises all functions of the platform and gives step-by-step support.

The Wadden Sea World Heritage Exchange Platform is a product of Interreg VB project PROWAD Link. 15 project partners in Denmark, Germany, the Netherlands, Norway, and the United Kingdom, working with interested small and medium-sized businesses, used the “nature-business-benefit-cycle” concept to develop new, sustainable products and offers in the pilot regions of the Wadden Sea (DK, D, NL), Geiranger Fjord (NO), Wash & North Norfolk Coast (UK). The 2018-2022 project was co-funded by and carried out in the framework of the Interreg North Sea Region Programme under the Programme Priority 1 “Thinking Growth”. The programme is funded by the European Regional Development Fund (ERDF) of the European Union.

CWSS-ORIS PARTNERSHIP

SECOND WADDEN SEA WATCH INTRODUCED ON FANØ

On 11-14 August, this year's annual event themed "Change for the better" of the Common Wadden Sea Secretariat's partnership with Swiss watch manufacturer Oris, took place on the Danish Wadden Sea island of Fanø. Oris' guests met with people engaged in Wadden Sea protection, learning about, e.g., the "no-fence" experiment that investigates how cattle grazing using virtual fences can take place in a way that best suits the protected areas without obscuring the view. The initiative, Ren Strand Fanø, presented their work to local people, visitors, authorities, organisations, and institutions, to inform them about the issue of marine litter.

At the event, Oris introduced "Dat Watt Limited Edition II", the second watch dedicated to Wadden Sea World Heritage in the framework of the

CWSS-Oris partnership. Parts of the proceeds from the sale of the Dat Watt II watch will go towards supporting the trilateral education and youth engagement efforts to engage and inspire young people to build relationships with nature. The watch features salt marshes, one of the essential and most biodiverse habitats in the Wadden Sea and important, natural storage of CO₂.

After a three-year period, the partnership was extended for another two years. It is the first cooperation that has been undertaken between the Wadden Sea and a private enterprise and is part of a series of watches which Oris have produced with the aim of celebrating marine heritage while highlighting the importance of the conservation of the oceans. The cooperation also enhances awareness of the Wadden Sea and the trilateral work.

"We have had some exciting years with Oris filled with enriching activities and benefits for both sides. We are very happy to continue this partnership", says Anja Domnick, CWSS Programme Officer Trilateral Cooperation. "With the partnership renewal, Oris will support CWSS' efforts in inspiring the next generation in conservation. This is very important for us as protection will soon be in the hands of today's young generation."

This cooperation follows the main principles of the regulatory framework that UNESCO has adopted for cooperation with the private sectors (PACT – Partnerships for Conservation).



Inspecting the new limited edition Dat Watt II watch dedicated to Wadden Sea salt marshes © CWSS/Domnick

SOCIAL MEDIA CAMPAIGNS 2023

RAISING AWARENESS FOR THE WADDEN SEA ON NEW MEDIA

Belvédère lagoon en Haut © DJJ

Social media can serve as a powerful tool to promote positive change and raise awareness about environmental conservation efforts. The Wadden Sea World Heritage

and Trilateral Wadden Sea Cooperation are represented on social media by the Common Wadden Sea Secretariat (CWSS). This year, two campaigns, “PNBaxWaddenSea” and “You are a

guest - this is where I live. The Wadden Sea.”, are prime examples of how social media can be used to foster collaboration and inspire individuals to take action towards preserving natural heritage.


PNBaxWaddenSea: Celebrating diversity and commonalities

The “PNBaxWaddenSea” campaign fosters dialogue and appreciation for two distinct coastal regions: the globally significant Wadden Sea, an expansive intertidal habitat for migratory birds, and the richly biodiverse Banc d’Arguin in Mauritania. Both UNESCO World Heritage Sites face challenges of climate change, pollution, and overfishing. To encourage collaboration, the National Park Banc d’Arguin (PNBA) and CWSS launched a campaign with joint monthly posts on Facebook and Instagram. Captivating photos and informative text raise awareness about the ecosystems’ significance and challenges and emphasise their ecological value. The campaign advocates for their protection by highlighting the diverse flora, fauna, and natural wonders found there. It deepens the audiences’ understanding, fosters a sense of shared responsibility and transcending boundaries, and promotes global environmental stewardship. The campaign’s collaborative approach aims to inspire individuals worldwide to take action and contribute to the preservation of these remarkable coastal regions.

“You are a guest - this is where I live. The Wadden Sea.”: Empowering Responsible Actions

The campaign “You are a guest - this is where I live. The Wadden Sea.” aims to promote responsible behaviour and raise awareness about the importance of preserving the Wadden Sea World Heritage Site. This vast and diverse habitat is home to a wide range of plant and animal species and thus, should be treated respectfully. The campaign, a collaborative effort be-

tween WWF Germany, the Common Wadden Sea Secretariat, and the Wadden Sea National Park Authorities of Lower Saxony, Hamburg, and Schleswig-Holstein in framework of Interreg project PROWAD Link, featured a series of short videos, released between 8 to 17 March 2023. In these videos, five representatives from the animal and plant world of the Wadden Sea reverse roles and visit human homes. The purpose of these thought-provoking clips was to encourage viewers to reflect on their own behaviour in nature and recognise that the Wadden Sea is not just a scenic destination but also a home, a lifeline, and a sanctuary for its residents. By emphasising the concept of being a good guest in nature, the campaign sought to foster a sense of responsibility. The videos can be used by Wadden Sea stakeholders and downloaded via CWSS’s content pool: www.waddensea-worldheritage.org/branding-toolbox.

The “PNBaxWaddenSea” and “You are a guest - this is where I live. The Wadden Sea.” campaigns have effectively utilised social media to educate, engage, and inspire individuals towards environmental conservation. They are also examples of collaborations with partners that enrich the social media impact of all involved. 

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20 YEARS OF IWSS

FROM SCHOOL TRIP ORGANISER TO EDUCATORS' NETWORK

The International Wadden Sea School (IWSS) is commemorating its 20th anniversary, signifying two decades of promoting trilateral Wadden Sea education and fostering collaboration in the Wadden Sea region. Throughout these years, the IWSS has been at the forefront of driving environmental knowledge and establishing strong partnerships within the region.

The IWSS stands as a beacon of collaboration, uniting environmental educators from Wadden Sea visitor centres in Denmark, Germany, and the Netherlands in an open network. Together, they share experiences, exchange approaches, and collectively develop ideas for transnational activities and trilateral resources dedicated to Wadden Sea education. This unique platform fosters a sense of shared responsibility and promotes the Wadden Sea as a cohesive entity.

Coordinated by WWF Germany and the Common Wadden Sea Secretariat, the IWSS serves as the cornerstone of trilateral Wadden Sea World Heritage education. It is now entrusted with the implementation of the “Wadden Sea Strategy on Education for Sustainable Development and World Heritage Interpretation”, agreed upon in 2018.

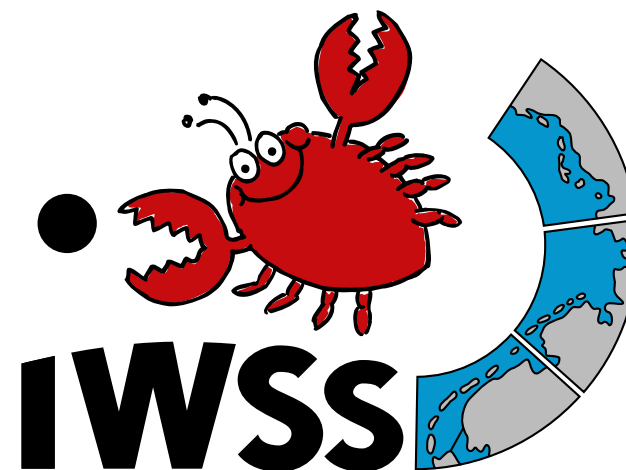
Inspiring evolution

Its original purpose was slightly different. IWSS initiator Hans-Ulrich Rösner embarked on a mission to nurture the younger generation's connection with the Wadden Sea and its transboundary character. The approach: enable school classes to visit the Wadden Sea across the borders. The Trilateral Wadden Sea Cooperation (TWSC) and nature NGOs agreed and, in 2003, founded the International Wadden Sea School. Thereby, educational outreach was

established as an important component of the TWSC, next to its political and management-oriented work.

Enter Anja Szczesinski, biologist and educator, recruited by WWF to coordinate the school and IWSS personified to date. Over the next four years, together with partners all over the Wadden Sea region, Szczesinski enabled 47 school classes with 1,210 pupils from Denmark, Germany, and the Netherlands to visit the Wadden Sea, including beyond their national borders. With lasting effect. “I know of a school from Schleswig-Holstein's Heide that has been organising trips to the Danish Island of Fanø ever since”, says Szczesinski.

Over the years, another focus came to view: instead of selectively reaching children with each class trip, it became clear that a shift in the target group could be more efficient. The mission





School children experiencing the Wadden Sea at Westerbork, Germany © IWSS

of the IWSS was reformulated to now raise awareness of the Wadden Sea as a shared nature area among educators and multipliers at the visitor centres the children would go to. What emerged was more than just an educational initiative; it became a dynamic platform to impart knowledge, foster engagement, and ignite an everlasting passion for the conservation of this remarkable ecosystem.

The benefits of sharing

With the new mission, the new approach was to organise workshops and create a space for the educators to network and share knowledge and experience. In the beginning, openly sharing was viewed with scepticism: “The centres’ operators saw direct competition with each other”, recalls Szczesinski. “People were reluctant to showcase their products.” With time, however, relationships were built, the network grew, and an understanding emerged that, due to the widespread locations of the centres, there was little competition to be concerned about. The message of IWSS became clear: collaboration is the key to unlocking a world of boundless ideas, high quality, and diversity. Today, the centres embrace the IWSS network as a source of mutual inspiration and have formed it into a collaborative community. The most recent example is a compilation of migratory bird fact sheets that has been developed by the Lower Saxon Wadden Sea National Park administration for visitor centres and national park guides to use on birdwatching tours; and, with Denmark and The Netherlands being partners for this year’s “Zugvogeltage”, the compilation (including the beautiful drawings) has been made available for a trilateral IWSS edition to be shared with the entire network.

Sharing the transboundary spirit

The International Wadden Sea School also became publisher of its own educational products, made available to centre operators and schools alike via www.iwss.org. From posters on flora, fauna, and flyway, to a banner displaying the Wadden Sea from space, and to more complex products such as discovery guides and a flyway game, numerous ideas have been

implemented over the years. The IWSS has even published a Wadden Sea dictionary with all the essential Wadden Sea terms in Danish, Dutch, German, and English.

“We have certainly learned a lot about the ingredients of successful educational material over the years”, says Szczesinski. Another factor in the success of a product is how it is made

available. While all material is presented on the IWSS website and can be printed out, large numbers of professionally made copies are usually made with the help of project funds during the initial introduction of a product. When all copies have been distributed, going to reprint usually takes time and special funds. “My vision for IWSS products is to one day have a one-stop-shop, where copies are printed as they are ordered.”

Regardless, these trilateral products have opened doors to a greater understanding of one’s place in a larger ecosystem, instilling a sense of awe and responsibility in its younger participants.

Igniting a transnational perspective

The implementation of the 2018 education strategy has sparked a wave of initiatives across the Wadden Sea region, gradually solidifying the trilateral

approach. While a consistent narrative is still evolving, the Wadden Sea World Heritage title resonates in educational settings, signifying the progress being made. IWSS, acting as a tool for change, plays a pivotal role in supporting this process through capacity building and fostering trilateral collaboration. The education strategy is a milestone that marks an important shift, as education is now even more embraced as an intrinsic part of the TWSC, raising awareness, and garnering appreciation for its crucial role in preserving the Wadden Sea’s ecological wonders.

Looking beyond borders

Reaching out beyond the Wadden Sea area, IWSS has cultivated a fruitful partnership with the managers of the South Korean mudflats “Getbol”, within the framework of the Trilateral Wadden Sea Cooperation’s Memorandum of Understanding with the Republic of Korea since 2009. This collaboration has involved exchanges and visits between Korea and the Wadden Sea. The dialogue has been enriching, with both sides exploring innovative resources and ideas from one another. For example, the poster “Discover and protect our Wadden Sea World Heritage Site”, one of the most widespread IWSS materials, was inspired by a very similar poster featuring the diversity of “Getbol” in Korea.

Szczesinski also sees great potential for collaboration with African colleagues, who share a connection to the migratory birds that visit both regions, within the “Migratory Birds for People” project, a network of visitor centres of multipliers of wetland education and bird migration knowledge. This initiative by Dutch colleagues, in collaboration



Children playing the flyway game – an IWSS product © IWSS



Participants of the 2018 IWSS workshop in Lauwersoog, Netherland © IWSS

In 2018, the Trilateral Cooperation adopted a trilateral education strategy in Leeuwarden, Netherlands © CWSS



with Wildlife and Wetlands Trust UK and Wetlands International, has paved the way for the development of bird and tidal flat education in these countries. The IWSS has established connections with this network as well as with the Wadden Sea Flyway Initiative (WSFI), focusing on scientific research, monitoring, and sustainable tourism.

Looking ahead

Education remains an important part of the Cooperation’s work: in the 2023 Wilhelmshaven Declaration, the Wadden Sea ministers agreed to con-

tinue and enhance activities within the framework of the trilateral education strategy, as well as further support the IWSS. Education is also specifically mentioned as one of the complementary activities to support management in the newly adopted “SIMP Integrated Management Plan for One Wadden Sea World Heritage”. “I believe that in the last two decades we have built a solid foundation for Wadden Sea education,” says Szczesinski. “Now we look towards enhancing our network and intensifying our cross-border collaboration in the years to come.”

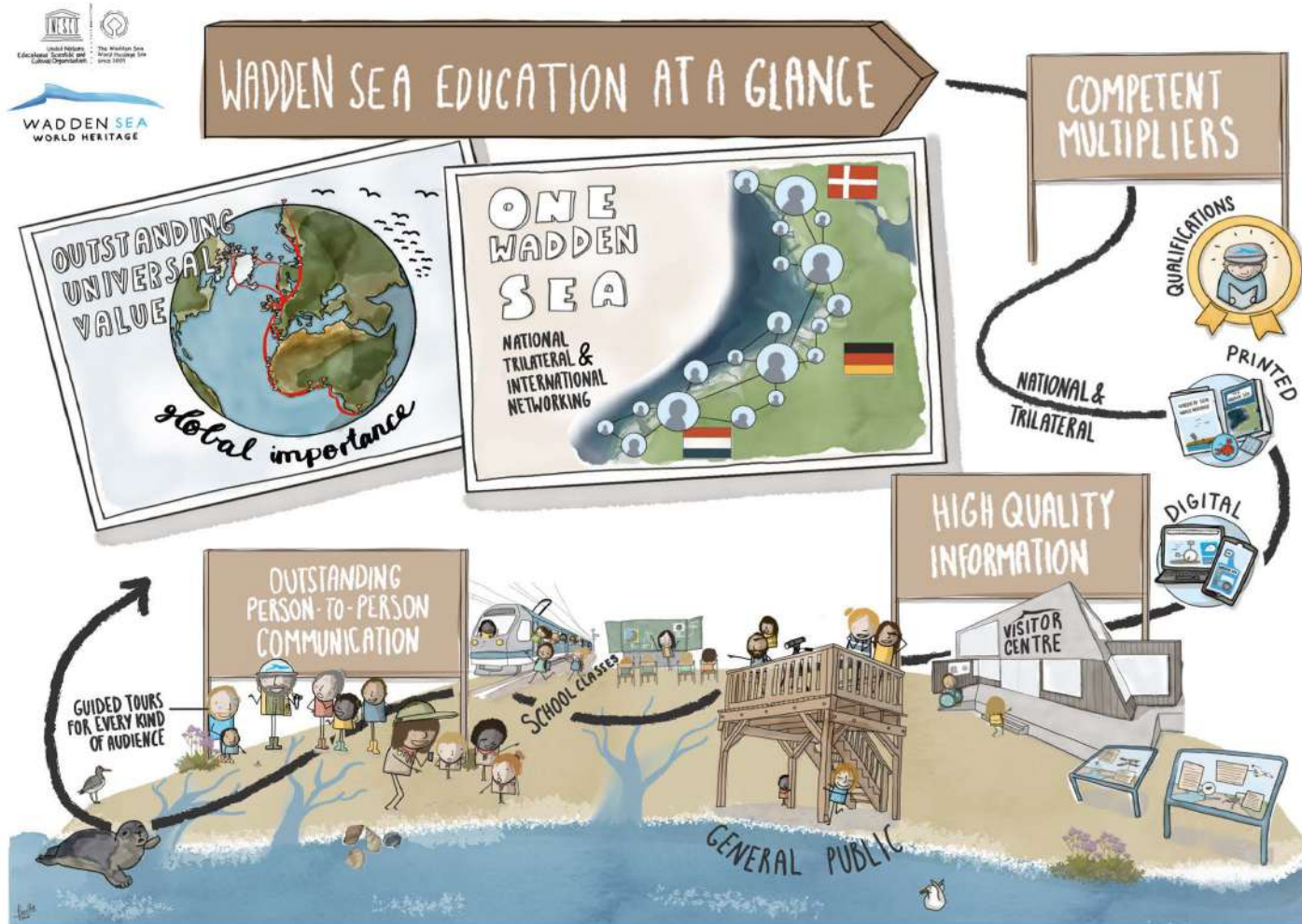
A collection of IWSS educational products © IWSS



FIRST IWSS LEAFLET ADVERTISING SCHOOL CLASS TRIPS TO THE WADDEN SEA



Discover and protect the diversity of the World Heritage Site and National Park
Ontdek en beschermde diversiteit van het Werelderfgoed en Nationaal Park
Entlecke und schütze die Vielfalt im Weltauerbe und Nationalpark
Gå på opdagelse og beskyt mangfoldigheden i verdens naturarvs området og nationalparken



Participants of the 2022 Trilateral Youth Conference © Sarah Fuhrmann



ACHIEVEMENTS AND OUTLOOK

TRILATERAL WADDEN YOUTH

After the inspiring Trilateral Youth Conference 2022 and the participation at the 14th Trilateral Governmental Conference, a group of engaged young people continued working on how youth could be more involved in the Trilateral Wadden Sea Cooperation (TWSC).

A core group was formed and continued discussing ideas and plans in online meetings on a regular basis. Now there are two interlinked parts the group is focussing on. They want to involve and connect youth and to represent youth at a trilateral level.

The first goal is to build up a Trilateral Wadden Youth Network as a structure that connects young people from all three countries. The first step towards that will be another youth event in 2024, that the core group is currently planning and that will take place 9 to 12 May in the Netherlands. This will allow recruitment of more people and give room for exchange of ideas, networking, collecting ideas, and planning. This event will also be the official start of the Trilateral Wadden Youth Network.

The long-term goal is to create a network that involves, connects, and represents youth in the Wadden Sea trilaterally. It aims to facilitate networking of different youth initiatives and develop ways of youth involvement, sharing of knowledge and experiences as well as collecting opinions from young people who live and engage in the Wadden Sea area. Furthermore, the goal is to not only communicate youth opinions within the TWSC but also to communicate their topics to youth.

Network activities and an online platform shall inspire more young people to get involved and engage in the Wadden Sea but also connect already active youth and function as a central hub for sharing knowledge and initiatives, as well as personal experiences. The network should also be a way to collect youth perspectives, values, and visions to represent the voice of the Wadden Youth.

The second goal for the youth network is to achieve an advisory position in the Wadden Sea Board

(WSB). In the meantime, to get better acquainted with the structure and working processes of the WSB and TWSC one or two representatives are invited to join the WSB meetings as guests. In May 2023, Sara Koek was invited to join the meeting in Esbjerg as a representative for the Trilateral Wadden Youth.

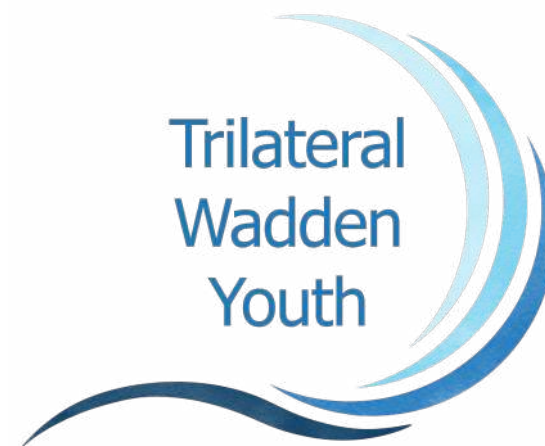
Currently, most of the engaged people in the core group are students who are contributing in various ways in the Wadden Sea area but did not necessarily grow up in the area. One additional goal of the network is to reach young people who grew up and live in the Wadden Sea area, to encourage them to share their views and opinions of the Wadden Sea.

Also, for now, there are no Danish participants. The hope is to reach more young and engaged Danish people for the youth event in May, so a truly trilateral perspective is possible.

The youth event in 2024 will be the next big step towards an enhanced network with an expanded structure,

that will hopefully provide more capacity and possibilities to dive deeper into crucial themes, to share ideas, and organise activities.

The network is represented on and can be reached via the Wadden Sea Exchange Platform: <https://exchange.waddensea-worldheritage.org/node/129>



EAST ATLANTIC FLYWAY YOUTH FORUM 2023

INSPIRING CONSERVATION NARRATIVES EXCHANGED

The 3rd East Atlantic Flyway Youth Forum (EAFYF 2023) was held on 9-10 September 2023. More than 40 young adults, aged 18-30, from different countries along the East Atlantic Flyway, gathered to enhance their conservation skills, with a central focus on harnessing the power of 'Conservation Storytelling' as a vital tool for effective stakeholder engagement in conservation efforts.

The forum was led by renowned trainers, including Sacha Dench, acclaimed as the 'Human Swan,' and Kathleen Retourné, an experienced journalist and communication specialist. Participants learnt how to effectively communicate conservation messages and

how to convey their own experiences in conservation narratives.

The training focused on establishing the foundational skills essential for impactful conservation storytelling and presentation as well as exploring the dynamic relationship between 'Conservation Storytelling' and the digital world. The EAFYF Ambassador Programme was also introduced. This initiative will engage 15 young volunteers to represent flyway youth across the East Atlantic Flyway. The East Atlantic Flyway Youth Forum 2023 was again jointly organised by the Common Wadden Sea Secretariat, Migratory Birds for People (represented by the Wildfowl and Wetlands Trust), and Youth Engaged in Wetlands.



WADDEN SEA AND KOREAN GETBOL

UPDATE TO MEMORANDUM OF UNDERSTANDING SIGNED

The Wadden Sea may be the largest unbroken tidal flats system in the world, where processes run largely undisturbed. However, it is not the only extensive sand and mudflat ecosystem. A seascape of comparable size and significance to global biodiversity exists in the Yellow Sea across the coastline of the Republic of Korea, the Democratic People's Republic of Korea, and People's Republic of China. Parts of the South Korean tidal flats called Getbol have been inscribed in UNESCO's World Heritage List in 2021 – a success as it underlines the global importance of our tidal flats around the world. Since 2009, the Republic of Korea and the countries of the Trilateral Wadden Sea Cooperation have

been in mutual exchange – on topics such as management, environmental education, and sustainable tourism, but also on the Wadden Sea's experience in becoming a World Heritage Site. Now that both sites carry this title, an **update to the Memorandum of Understanding** underlining the cooperation was due.

As World Heritage Sites there is an increased joint responsibility in implementing the World Heritage Convention in cooperation with all involved stakeholders. This concerns protection and management measures at ecosystem level, exchange of experiences in habitat restoration, cooperation in scientific research such as blue carbon, as well

as dealing with climate change, and energy transition such as offshore wind farms. Another important topic is environmental education and awareness raising e.g., by supporting visitor centres integrating the World Heritage programme. Over the past ten years, regular study visits have been carried out coordinated by Ji Young Jang (EcoHorizon, Korea) and Anja Szczesinski (WWF Germany).

"The cooperation with Korea is of great importance to the Wadden Sea", says Soledad Luna, responsible for international cooperation at the Common Wadden Sea Secretariat. "The Yellow Sea faces similar challenges as the Wadden Sea and we can profit from exchanging our experi-

ences on how to deal with them on a global scale, and enhance the profile of the cooperation internationally".

"Korea and the Wadden Sea countries will further strengthen the conservation and management of their mudflat systems as World Heritage Sites through the updated MoU", says Jae-Young Shin, Director of Korea's Ministry of Oceans and Fisheries. "I hope we will continue working together as partners to discuss various issues related to the ocean, such as energy transition, blue carbon, as well as mudflats."

Since 2009, many new tidal flat areas in South Korea have been designated as protected areas. To date, 15 areas have

been designated as protected areas and large parts are inscribed on the World Heritage List. This has further increased the public awareness of the Getbol as one of most important sites for migratory birds and biodiversity.

Since signing the MoU in 2009, about 240 experts have participated in the exchange, involving over 2,600 persons at both sites. The MoU has raised the profile of both areas regarding protection of tidal flats nationally and internationally, underlined the necessity to provide scientific knowledge for management, strengthened the capacity for communication and education, and provided many valuable examples for practitioners which they can apply at their site. ~~~

Signing of the MoU update in Esbjerg on 15 May 2023 © KOEM



DECISION 45 COM 7B.23

WADDEN SEA

(Denmark, Germany, Netherlands) (N 1314ter)

The World Heritage Committee,


1. **Having examined** Document WHC/23/45.COM/7B.Add.2,
2. **Recalling** Decisions 33 COM 8B.4 and 38 COM 8B.13 adopted at its 33rd (Sevilla, 2009) and 38th (Doha, 2014) sessions respectively,
3. **Welcomes** the development of the 'Agenda for the Wadden Sea Region 2050' in 2021 and the adoption of the 'Single Integrated Management Plan' (SIMP) for the transboundary property in 2023 and **strongly encourages** the States Parties of Denmark, Germany and the Netherlands to adopt a precautionary and strategic approach to the management of the property, including to clarify longer-term projections based on the latest scientific climate change data for the Wadden Sea;
4. **Reiterates its position** that extractive activities are incompatible with World Heritage status, and **considers** that natural resource extraction below the property has the potential to adversely impact its Outstanding Universal Value (OUV);
5. **Also welcomes** the confirmation by the State Party of the Netherlands that no new gas extrac-

- tion permits will be issued in the Wadden Sea, but **notes with serious concern** the approval of a new salt extraction project and the ongoing consideration of a proposed gas development at Ternaard, in the vicinity of the property, which would extend extractive activities below the **property**;
6. **Notes with further concern** that, in the Environmental Impact Assessment (EIA) process, the State Party of the Netherlands has not undertaken a comprehensive assessment of the potential impacts of the proposed Ternaard gas extraction project on the OUV of the property when, based on information available, it would appear that the project has direct negative impacts on the OUV of the property, and therefore **urges** the State Party not to approve the project;
7. **Requests** the State Party of the Netherlands not to approve further extractive projects, in line with the precautionary principle, to assess whether adaptation of the 'hand on tap' monitoring mechanism is required to account for uncertainties linked to climate change, and to consider limiting or halting existing salt extraction

- activities, as required, to effectively maintain and protect the OUV;
8. **Also notes with serious concern** the Wintershall Dea's oil development, which is currently being considered by the State Party of Germany, and appears to be located inside the property, as well as the GEMS gas development located close to the boundary of the property;
9. **Also urges** the State Party of Germany not to proceed with any proposed oil exploration inside the property and to conduct a detailed EIA, including an assessment of potential impacts on the OUV of the property, for any oil or gas extraction project that may negatively impact the property, in accordance with the Guidance and Toolkit for Impact Assessments in a World Heritage Context;
10. **Further notes with serious concern** the scientific advice from the Independent Scientific Advisory Body (ISAB) established by the State Party of the Netherlands that, as a result of salt mining, there is a reasonable probability that future sediment accretion will be insufficient to offset sea level rise and that the potential for

subsidence of the seabed will be prolonged once the mining operation is stopped, and **also considers** that subsidence of the seabed, especially in the light of projected sea level rise as a result of climate change, could reduce the extent of the tidal flats, which are one of the main attributes of the property's OUV, and therefore directly result in a significant negative impact on the property's OUV;

11. **Further welcomes** the decision by the State Party of the Netherlands to carry out additional studies on the proposed routing to connect the planned offshore wind power installation to the mainland, through impact assessments specifically focused on the property's OUV and including an assessment of the impacts of the potential hydrogen production north of the Wadden Sea and the pipelines to be constructed for delivering the substance to the mainland, and **also requests** the State Party to submit these assessments to the World Heritage Centre for review by IUCN prior to a final decision on the projects;
12. **Notes** the numerous existing and proposed wind energy projects in the vicinity of the property and **encourages** the States Parties to use the online Guidance for Wind Energy Projects in a World Heritage Context when planning and assessing their impacts and taking proactive measures for the protection and preservation of the property's OUV;
13. **Further notes** the multiple existing and/or proposed extraction and infrastructure developments within and around the property, and **further requests** the three States Parties to:

1. Provide to the World Heritage Centre and IUCN an overview of all existing and planned extractive activities within and around the property, with appropriate maps,
2. Conduct a joint Strategic Environmental Assessment to assess the cumulative impacts of these developments on the OUV of the property, in line with the key principles of the Guidance and Toolkit for Impact Assessments in a World Heritage Context, prior to continuing to permit individual projects on a case-by-case basis,
3. Authorise project proposals only if adequate assessments demonstrate that they will not have an adverse impact on the OUV of the property;
14. **Finally requests** the States Parties of Denmark, Germany and the Netherlands to submit to the World Heritage Centre, by **1 February 2024**, an updated joint report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 46th session. 

DISCLAIMER

During their 45th session, 10-25 September 2023, the World Heritage Committee adopted the Decision 45 COM 7B.23 prepared by the World Heritage Centre and the International Union for Conservation of Nature (IUCN). On this page, the original text of the Committee's Decision is displayed.

UNESCO WORLD HERITAGE MARINE PROGRAMME

UNESCO WORLD HERITAGE MARINE SITE MANAGERS' MEETING IN ESBJERG



Fanny Douvere, Head of the Marine Programme © UNESCO/Hjørring Tausen

Between 5 and 9 October 2023, over 30 site managers from 22 World Heritage marine sites met at the fifth edition of the UNESCO World Heritage Marine Managers Conference in Esbjerg, Denmark. The agenda focussed on the exchange of know-how and practices on various topics such as partnerships, climate change adaptation, and challenges and solutions of invasive alien species. The Conference was organised by UNESCO in cooperation with the Trilateral Wadden Sea Cooperation.

Every three years, UNESCO invites the local managers of 50 ocean places on the World Heritage List across 37 different countries to come together

within the framework of the UNESCO World Heritage Marine Programme.

The sites are not only connected through the ocean, but also share a lot of challenges, first and foremost climate change effects, biodiversity loss, and invasive species. "The World Heritage Centre works with all of these sites on a daily basis – we know of the struggles, challenges, but also solutions," says Fanny Douvere, Head of the Marine Programme. "When the programme was launched in 2005, we concentrated on working with the sites individually or on a regional scale. But seeing the similarities in all sites, we soon added a global scale." The first UNESCO World Heritage Marine Managers Conference took place in

Hawaii, USA, in 2010. Among the World Heritage site managers now visiting the Wadden Sea were colleagues from Komodo National Park in Indonesia, Tubbataha Reefs Natural Park in the Philippines, Ningaloo Coast in Australia, Aldabra Atoll in Seychelles, iSimangaliso Wetland Park in South Africa, and Area de Conservación Guanacaste in Costa Rica.

Language of nature conservation

"Through our work, we at UNESCO see that the different managers have similar challenges and think of similar approaches," continues Douvere. "We have experienced that sharing these on-the-ground practices can not only avoid costly mistakes, but also accele-

rate conservation progress in the sites. This meeting serves as an exchange platform." The conference programme focussed on the exchange of inspiring ideas from the different sites with a focus on climate change adaptation and community resilience, delivering successful outcomes for conservation, and building partnerships and sustainable finance for conservation.

"What strikes me the most in this group of people is that despite all the differences – language, culture, socio-economic context, natural features, but also financial and management setups – all managers speak the same language when it comes to conserving nature," says

Douvere. "This hugely diverse group sets aside its differences and builds bridges for common solutions. It is inspiring how well and with how much enthusiasm we work together. This, for me, is UNESCO in action. Uniting managers from across the globe and joining forces to accelerate successes in addressing some of the biggest challenges of our times. This is the United Nations in action." Past conferences have brought forward a number of shared solutions. For example, the idea of formulating a Memorandum of Understanding between the Wadden Sea and Mauritania's Banc d'Arguin originated at the 2013 conference in Scandola Reserve, France. The 2019 conference in Glacier Bay, USA,



Over 30 site managers were present at the 5th edition of the UNESCO World Heritage Marine Managers Conference © UNESCO/Hjortborg Tausen

inspired site managers of the West Norwegian Fjords – Geirangerfjord and Nærøysfjord in Norway to build up a ranger programme for cruise ships in cooperation with the Glacier Bay team. The 2016 conference in the Galapagos laid the foundation for building climate adaptation strategies in marine World Heritage sites in Palau, Belize, Australia, and France.

Flagship network

Launched in 2005, the mission of the UNESCO World Heritage Marine Programme is to ensure effective conservation of existing and potential marine areas of Outstanding Universal Value so they will thrive for generations to come. The programme has three main areas of focus: monitoring the state of conservation, connecting a flagship network of site managers, and building resilience and climate adaptation capacity.

Within the framework of the programme, [eDNA sampling campaigns](#) were organised across 21 marine World Heritage sites in 17 countries, including the Wadden Sea. Environmental DNA (eDNA) is genetic material from waste, mucus or cells in water. One litre can determine the species richness in a given area, without the need to actually extract organisms from their environment. The results of the project are expected to provide a one-off biodiversity snapshot, with a focus on fish and megavertebrates, many of which are on the IUCN Red List vulnerable and endangered species. Combined with projected ocean warming scenarios, an analysis will be made of how climate change is affecting the world’s most exceptional marine biodiversity. The results will be

made publicly available in the first half of 2024.

The programme further brought forward the 2019 report on [blue carbon and Marine World Heritage](#), stating that the 50 marine sites comprise at least 21% of the global area of blue carbon ecosystems and 15% of global blue carbon assets – while encompassing only 1% of the oceans. The report underlines the significance of conserving these sites and contributes to the recent increase of attention given to oceans by the international community as well as the UN Ocean Decade.

Introducing the Wadden Sea

Located in Esbjerg, the conference programme also set aside space to introduce the visiting site managers to the Wadden Sea World Heritage Site. Colleagues from the Wadden Sea Centre in Vester Vedsted organised a visit to the mudflats during low tide. A field trip to the island of Fanø was also included. Another highlight was two traditional dance groups, one from Fanø, Denmark, the other from Föhr,

Participants of the conference exploring the Wadden Sea at low tide © UNESCO/ Hjortborg Tausen



Schleswig-Holstein – who introduced the participants to their cultures. “The Wadden Sea faces challenges just as every other ocean site, but it also has a number of inspiring solutions”, says Douvere. “The Trilateral Cooperation invests a lot in understanding the impact of climate change, for example, or engaging with stakeholders. Managing a cross-border site of this size is not easy and the Common Wadden Sea Secretariat approach to building a joint management plan was inspirational to many managers.”

Regarding the natural features of the Wadden Sea, Douvere was especially impressed by the tides and the fact that two billion cubic metres of water flow in and out of the area with every tidal circle. She appreciates the significance of this massive stopover for migratory birds and how it connects through them to other World Heritage sites, such as the Banc d’Arguin National Park. Douvere adds “When exploring the mudflats, one can only be fascinated by the various small creatures to be discovered in the mud.

You realise the enormous network that they are part of.”

“The conference was a great opportunity to self-reflect on our trilateral cooperation – where we are today and what we can improve further,” adds Soledad Luna, Programme Officer for World Heritage at the Common Wadden Sea Secretariat. “It was a privilege to host this conference and I would like to thank the three countries, especially the hosts, Denmark, Schleswig-Holstein, Esbjerg Munic-

ipality, and, of course, the UNESCO team for making the event happen.”

The next edition of the UNESCO World Heritage Marine Managers Conference is scheduled for 2026.



TRILATERAL WADDEN SEA COOPERATION 2023 TO 2026

CHALLENGES AND FOCUS OF THE DANISH PRESIDENCY

Concern – and care for the common Wadden Sea

The [Trilateral Wadden Sea Cooperation \(TWSC\)](#) was established in 1978 by Denmark, Germany, and the Netherlands to promote international cooperation and to share responsibility in the management and protection of the Wadden Sea, which on a global scale is a unique ecologically important coastal wetland system.

Establishment of the Wadden Sea Cooperation was a response to severe concerns about the environmental degradation of the Wadden Sea. The member countries recognized that the complex and interconnected nature of the Wadden Sea

ecosystem required a coordinated and cooperative approach to management and protection.

The inscription of the Wadden Sea as World Heritage in 2009/2014 marked a completion of a goal that the three countries had been pursuing over several years, based on the fact that the Wadden Sea is a unique and important ecosystem consisting of tidal flats, salt marshes, and barrier islands, and is home to many species of birds, fish, and marine mammals, being one of the largest remaining areas of undisturbed intertidal habitats in the world, featuring i.a. dynamic processes, rich biodiversity, and crucial migration routes for birds.

Pillars of the cooperation

The formal political confirmation was expressed by the adoption of the joint [Copenhagen Declaration in 1982](#) and its [elaborated successor in 2010](#) with the accompanying [Wadden Sea Plan \(WSP\)](#).

The Wadden Sea Plan is the joint policy and management plan for the protection and sustainable management of the Wadden Sea area, and it is also the joint management plan for the [UNESCO World Heritage site](#).

A unique and fundamental feature of the Wadden Sea Plan is that it aims to achieve the full range of habitats that belong to a natural and dynamic



Ministry of Environment
of Denmark
Environmental
Protection Agency

DISCLAIMER



With the conclusion of **the 14th Trilateral Governmental Conference**, held on 28 November to 1 December 2022 in Wilhelmshaven, Germany, **the presidency of the Trilateral Wadden Sea Cooperation was handed over to the Kingdom of Denmark for 2022-2026**. Offering an overview of the presidency's priorities, **the Danish Environmental Protection Agency submitted the text on pages 40 and 41 to the 41st meeting of the Wadden Sea Board, held on 15-16 May 2023 in Esbjerg, Denmark.**

Wadden Sea. Each of these habitats, for which common trilateral objectives have been adopted, needs a certain quality (natural dynamism, absence of anthropogenic disturbances, absence of pollution) which can be achieved by proper management of the area.

At the [Wilhelmshaven Conference in late 2022](#) the Wadden Sea Plan was supplemented with the [Single Integrated Management Plan](#) for the Wadden Sea World Heritage area (SIMP). The Trilateral Wadden Sea Single Integrated Management Plan is a comprehensive, cross-border plan that addresses the protection and sustainable use of the Wadden Sea ecosystem. Its fundamental features include a holistic approach to management, stakeholder involvement, adaptive management, and the integration of conservation and sustainable use objectives.

Cooperation aims and strategies

The cooperation aims to promote sustainable development, protect the Wadden Sea's natural resources, and ensure that the area is preserved for future generations. The successful designation of the Wadden Sea as UNESCO World Heritage was both a recognition of the area's global importance as an important

leverage in the protection of the area and the broad popular acceptance of this.

Since its establishment, the Trilateral Wadden Sea Cooperation has been instrumental in developing joint management plans, conducting research/monitoring activities, and implementing measures to protect the Wadden Sea ecosystem.

The fact that the cooperation provides a platform for dialogue and collaboration among the three countries, as well as with other stakeholders, such as NGOs and scientists, is considered increasingly important in the pursuit of effective management of the Wadden Sea.

Challenges in the years to come

The Trilateral Wadden Sea Cooperation has addressed multiple challenges threatening the integrity of the Wadden Sea since 1978, but the rising concerns of the effects of the combination of climate change, biodiversity loss and pollution named "[The Triple Planetary Crisis](#)" points the focus of the Trilateral Wadden Sea Cooperation in this direction over the coming years. Especially the necessary transition towards sustainable energy sources addressing the climate

challenge will need awareness since the Wadden Sea potentially will be adversely affected by the infrastructure it brings.

The triple Planetary Crisis

The triple planetary crisis of climate change, biodiversity loss, and pollution presents significant challenges for the economy, nature protection, and biodiversity in the Wadden Sea World Heritage area. Some of these challenges include:

- **Climate change:** The Wadden Sea ecosystem is vulnerable to climate change, with rising sea levels and changing weather patterns affecting the area's biodiversity and habitats. The warming of the ocean can also affect marine life, such as fish stocks. Further, the necessary climate driven energy-transition, accelerated by recent political events in Europe, will potentially affect the Wadden Sea because much of Europe's green energy production and following industries will be centred in – and around the North Sea, increasing shipping and harbour activities as well as multiple cables and pipes crossing in and out of the Wadden Sea.
- **Biodiversity loss:** The Wadden Sea is an important habitat for many

species, including migratory birds and marine mammals. Biodiversity loss, caused by human activities such as pollution and habitat destruction, can have a negative impact on the ecosystem and the services it provides.

- **Pollution:** Pollution from land-based sources, shipping activities, and offshore activities can negatively impact the Wadden Sea ecosystem and its wildlife, as well as human health.

The Danish chairmanship 2023-2026

To address these challenges, the Danish Chairmanship intends to continue the holistic and integrated approach considering the interconnection between economy/human activities, cultural heritage, nature protection, and biodiversity loss.

The Trilateral Wadden Sea Cooperation provides a unique platform for collaboration and cooperation between Denmark, Germany, and the Netherlands to address these challenges and ensure the sustainable management and protection of the Wadden Sea World Heritage area.

Focus from the Danish chairmanship in the period 2023 to 2026 will include

1. 5th UNESCO [Site Manager Conference](#), Esbjerg, September 2023.
2. Update of the [Wadden Sea plan from 2010](#):
 - a. Triple crisis issues,
 - b. Energy transition issues and
 - c. Investigation into the feasibility of attaching indicators to the targets.
3. Focus on Added Value derived from The Trilateral Wadden Sea Cooperation.
4. Continued focus on TWSC's strategic pillars, not least:
 - a. The Wadden Sea Climate Change Adaptation Strategy
 - b. The Wadden Sea Flyway Initiative
 - c. The Wadden Sea Swimway Vision
5. To further improve coordinated management across the whole World Heritage Site tackling the challenges deriving from the triple planetary crisis of climate change, pollution and biodiversity loss.
6. Targeted implementation of [UN's Sustainable Development Goals](#), in particular goals 13, 14 & 15.

“TOGETHER FOR ONE WADDEN SEA WORLD HERITAGE”

WILHELMSHAVEN DECLARATION OUTLINES TWSC’S COURSE FOR THE COMING YEARS



“In the Wadden Sea area we enjoy a long tradition of cross-border cooperation to preserve this unique landscape with joined forces”



Participants of the Trilateral Governmental Conference in Wilhelmshaven © BMUV/ Andreas Klesse

Signed on 15 May 2023 by the Wadden Sea ministers of Denmark, Germany, and the Netherlands, the Wilhelmshaven Declaration is a decisive milestone in the preservation of the Wadden Sea World Heritage Site. The signing follows the paper's drafting around the Trilateral Governmental Conference, held from 28 November to 1 December, 2022, in Wilhelmshaven. Titled "Together for ONE Wadden Sea World Heritage," it centres around the Trilateral Wadden Sea Cooperation's (TWSC) guiding principle to conserve the ecological integrity of the Wadden Sea and acknowledges the pressing global challenges of climate change, biodiversity loss, and pollution.

"In light of climate change, biodiversity loss, and pollution, cooperating across borders to preserve nature is now more important than ever", says Anne-Marie Vægter Rasmussen, Chair of the Wadden Sea Board. "In the Wadden Sea area we enjoy a long tradition of cross-border cooperation to preserve this unique landscape

with joined forces. It's something to be proud of. But it gives us no reason to rest as we have many challenges lying ahead of us regarding the nature values and biodiversity. Therefore I am very happy that the Wilhelmshaven Declaration has been signed and is now ready to be implemented."

Addressing the Triple Planetary Crisis

The Declaration acknowledges the significant challenges posed by climate change, pollution, and biodiversity loss, the so-called Triple Planetary Crisis as defined by the United Nations, in the Wadden Sea region while recognising the immense potential of this natural ecosystem to offer solutions. As a species-rich ecosystem, the Wadden Sea plays a crucial role in carbon sequestration, making it an essential asset in addressing climate change. However, rising sea levels, increasing temperatures, and more frequent extreme weather events pose a substantial threat to the unique ecosystem and its biodiversity. Pollution and biodiversity loss further add to the challenges faced by the Wadden

Sea. The declaration's joint efforts aim to counter these challenges by implementing measures to protect the Wadden Sea's ecological integrity, conserve its habitats, and promote sustainable practices.

Resilience and sustainability

The three ministers commit to collective action to enhance the site's resilience, safeguarding not only its natural aspects but also its social and cultural significance. The policy paper aligns with the Sustainable Development Goals defined by the UN and fosters transboundary collaboration. A significant aspect is a commitment to sustainable development, notably adhering to the UN 2030 Agenda for Sustainable Development, the OSPAR North-East Atlantic Environment Strategy 2030, and the EU Biodiversity Strategy for 2030. It further strives to promote ecosystem restoration and foster cooperation with international organisations such as UNESCO and AEWa. Scientific research also plays a pivotal role in the conservation efforts outlined in the declaration. By valuing

THE TGC: A HISTORY OF COOPERATIVE CONSERVATION EFFORTS



Held every three to four years, the **Trilateral Governmental Conference (TGC)** of the Danish, Dutch, and German ministers responsible for Wadden Sea affairs **serves as a platform** for discussing policies, harmonisation, and management concerning the Wadden Sea region.

This collaborative approach underscores the significance of **inclusive decision-making**, acknowledging the importance of involving various stakeholders to achieve comprehensive and lasting conservation outcomes. During the conference, **the ministers as Trilateral Governmental Council** define the overall course of the Cooperation for **3-4 years** until the next conference, outlining their **collaborative efforts to protect and preserve the unique ecosystem of the Wadden Sea World Heritage Site**. At the end of each TGC, the presidency term of one country concludes, and the baton is passed to another. The rotation of the presidency **ensures equitable distribution of responsibilities** among the involved states, promoting a sense of **shared ownership in protecting this valuable heritage for the benefit of present and future generations**. The 14th TGC in Wilhelmshaven, Germany concluded the German presidency, and Denmark assumed the presidency thereafter.

THE DECLARATIONS: POLICY BACKBONE OF THE COOPERATION



Direct outcomes of the TGCs, the **declarations of the Trilateral Wadden Sea Cooperation** address the various challenges to the **preservation of the Wadden Sea World Heritage Site**.

Crafted through thorough negotiations and stakeholder input, **each declaration sets clear objectives and plays a vital role as the Cooperation's main policy paper** until the subsequent TGC. Upon adoption by the respective ministers, the document becomes the term's **guide** for the participating countries to **collaborate effectively in the conservation and sustainable management of the Wadden Sea**. Each declaration builds upon the accomplishments of the ones before it, **incorporating lessons learned and advancements in conservation science**. In addition, the so-called **Joint Declaration** serves as an overarching guideline, which highlights the Cooperation's **core guiding principles, vision, and objectives**.

and strengthening scientific activities, decision-making processes become more evidence-based, ensuring that management practices are based on robust knowledge.

Collaborative partnership as pillar

The importance of collaborative partnerships is another fundamental principle of the Declaration. Recognising the call for cooperation among participating countries, stakeholders, NGOs, and research communities, the declaration encourages joint efforts to protect the Wadden Sea's World Heritage status. Sustainability and resilience are key underlying principles. The declaration places a strong emphasis on transparency and participation, involving stakeholders and younger generations in decision-making processes. Linked to these principles is the concept of adaptive management. It advocates for a dynamic approach to conservation, where continuous evaluation and adjustment of measures take place in response to new challenges and scientific insights.

Milestone impulses

The Wilhelmshaven Declaration serves as an outline for concrete action over the coming years and, hence, will be the base document for the TWSC (see info box). Preceding declarations have proven the major role this policy paper plays in practical applications. For instance, the inscription of the Wadden Sea into the World Heritage List is a direct outcome of the 2005 Schiermonnikoog Declaration. The Trilateral Monitoring and Assessment Programme (TMAP), one of the operational cornerstones of the Cooperation, was adopted at the Ministerial Conference in Stade 1997. A milestone in the 2023 Wilhelmshaven Declaration is the adoption of The SIMP Integrated Management Plan for ONE Wadden Sea World Heritage. Functioning in harmony with the Wadden Sea Plan (2010), this integrated management plan outlines a comprehensive approach to conservation and serves as a blueprint for harmonising policies and actions across the participating countries and regions. The SIMP, as

TMAP, and the World Heritage designation, are some of the fundamental pillars of the Trilateral Wadden Sea Cooperation.

The 2023 Wilhelmshaven Declaration is available as PDF on the TWSC's website www.waddensea-worldheritage.org/2023-wilhelmshaven-declaration. Printed copies can be requested at the Common Wadden Sea Secretariat.

WILHELMSHAVEN DECLARATION



Anne-Marie Vægter Rasmussen © Miljøstyrelsen

WADDEN SEA FACES

ANNE-MARIE VÆGTER RASMUSSEN

“It is also important to understand the Wadden Sea as part of a bigger story – not just regarding birds, but generally embedded in nature that knows no national borders”



A lawyer by education, Anne-Marie Vægter Rasmussen has been working in the Danish Ministry of Environment for most of her career. She first became engaged in the Wadden Sea for some years in the 1990s and the beginning of the 2000s, as part of the Danish Delegation to the Trilateral Wadden Sea Cooperation (TWSC). In 2020, Anne-Marie returned as Head of the Danish Delegation and became Chairperson of the Wadden Sea Board, when Denmark took over the presidency of the Cooperation. The interview was held by Annika Bostelmann.

Why are you engaged in the Trilateral Wadden Sea Cooperation?

I was first engaged as it became one of my assignments as an employee of the ministry. However, I quickly became fascinated with the uniqueness of the Wadden Sea ecosystem as well as its importance on a global scale. Also, seeing the complexity of the area, when it comes to management, I think that aligning our responsibilities and structures regarding management

across borders is a huge challenge. In my work, I have often dealt with the preservation and the management of designated areas in Denmark as well as international obligations and, being attuned to these challenges, I hope to provide support.

What does the Wadden Sea mean to you?

I especially value that this is such a large landscape area with so many exceptional nature values, also on a global scale. At the same time, it is used by so many people and sectors. This complexity fascinates me. To me, it is also important to understand the Wadden Sea as part of a bigger story – not just regarding birds, but generally embedded in nature that knows no national borders. This international responsibility stands at the centre of the TWSC.

What is the image in your mind when you think of the Wadden Sea?

I immediately think of the open landscape and see tidal flats, barrier islands, and birds. What always strikes me the

most is the wide horizon, where you are fully immersed in the endless sky.

What is the most special place for you in the Wadden Sea?

This is very difficult to answer. There are so many great places in all parts of the Wadden Sea. If I had to choose and put on my national glasses, I'd say the Wadden Sea Centre in Vester Vedsted. It explains the area in such an excellent way – the birds, the tides, the ecosystem, the wildlife. And the building itself is so amazing and suits the area so well. Nearby the centre is the Mandø tidal causeway, which is a very special experience. Driving on it during low tide only thanks to the immense forces of the tide is an excellent way to make you feel small and realise that you cannot control everything.

In your eyes, what will the Wadden Sea look like in 2050? What message do you want to give to the next generation?


In 2050, we will hopefully have succeeded in preserving the Wadden

Sea's Outstanding Universal Value. Climate change and the rising sea level will impact the area, but I hope that we will have built up the Wadden Sea's resilience and the ecosystem will be able to cope.

I also see pressures on the area from the need for green energy transition on a large scale. Here, we must find a balance as both energy and nature preservation are very important. We should not jeopardise the nature values in the area and thus put the designation as World Heritage at risk. I hope that we will also find sustainable solutions to human activities in the area, such as tourism, shipping, and fisheries.

I believe that the TWSC can create a good example of sustainable management beyond its borders. But with many national and international obligations, we must navigate through the complexity and find a way to add value without duplicating efforts.

My wish for the next generation is that they continue what was started

at last year's youth conference. I urge them to speak up and come forward with their ideas within the Cooperation. I hope that they will live in a better balance with nature than we do today. 



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OUTLOOK

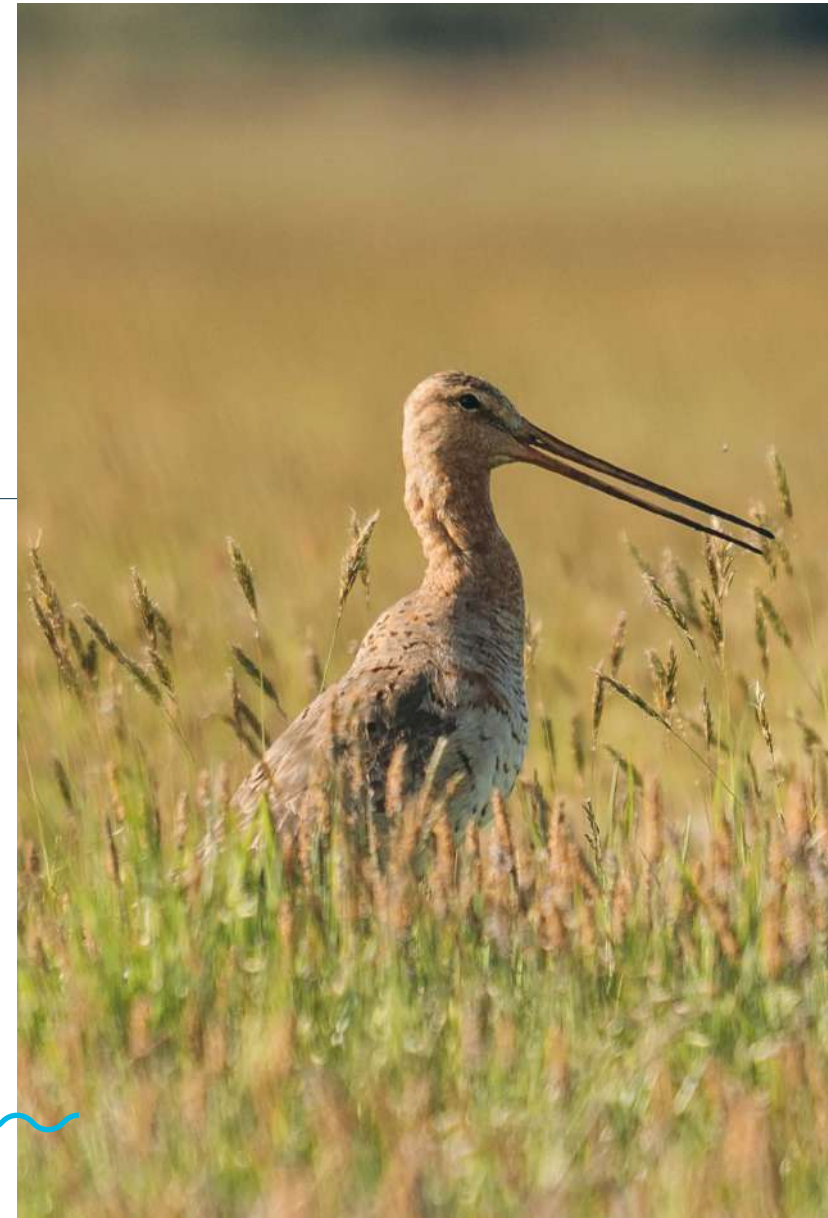
April
2024

As the Wadden Sea Board as well as each task, expert, networking, and working groups meet about twice a year, the calendar of the Trilateral Wadden Sea Cooperation is quite full. On top of these “working” meetings, this section highlights some upcoming events to mark in your agendas. Public events can also be found at www.waddensea-worldheritage.org/events.

In the framework of the Trilateral Wadden Sea Cooperation (TWSC), the second Trilateral Swimway Conference will be held on 17-19 April 2024 in Groningen, the Netherlands. The event will take a two-tiered approach: the outcomes of the latest research on fish life cycles will be balanced with contributions on the practical implementation of scientific findings to dedicated and effective conservation efforts.

May
2024

The trilateral youth event, planned 9 to 12 May 2024, will present the opportunity to further engage and connect young adults from the Wadden Sea region, dive deep into key topics and share ideas. This event will also be the official start of the Trilateral Wadden Youth Network.







Black-tailed godwit © CWSS/ Sten Wendling




Spring & Autumn 2024

In 2024, the Wadden Sea Board plans to hold two meetings, the first in spring, the second in autumn. The Wadden Sea Board is the governing body of the Trilateral Wadden Sea Cooperation (TWSC). It runs and oversees the work of the TWSC between sessions of the TGC, preparing, adopting, and implementing the Wadden Sea Plan, as well as policies and strategies. 

August 2024

The Wadden Sea World Heritage Summer School will be an opportunity for master students to learn about trilateral conservation, policy, and management aspects of the Wadden Sea. The Summer School will take place from 21 to 30 August, on the Island of Borkum where students will be able to experience the Wadden Sea, exchange ideas with managers and practitioners. 

August 2024

With a record attendance of over 150 participants, the Wadden Sea Day in 2023 sparked intriguing discussions dedicated to the Wadden Sea's biodiversity and the planetary biodiversity loss crisis. The Wadden Sea Day is not only a chance to do a deep dive into a specific area of work related to the Wadden Sea. It is also an exceptional opportunity for networking. As usual, in 2024, the event will be held on the last Thursday in August, in Wilhelmshaven. 

WADDEN SEA

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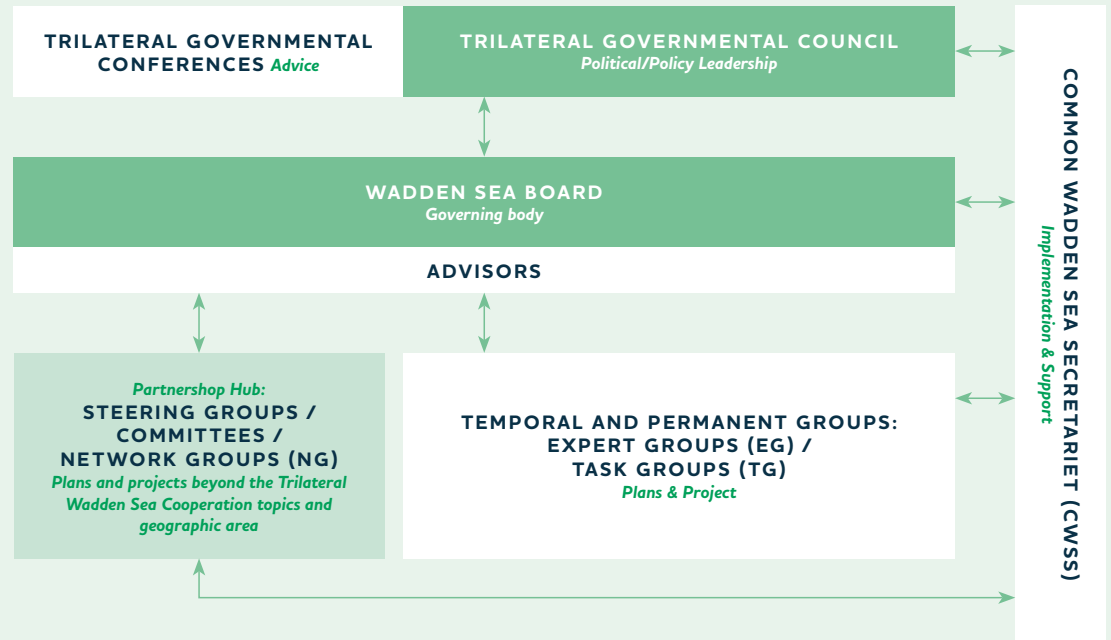
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N. N.

*Executive Secretary,
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