

COMMON WADDEN SEA SECRETARIAT

TRILATERAL WADDEN SEA COOPERATION ANNUAL REPORT 2024



TABLE OF

CONTENTS

03	<i>Editorial</i> Dear reader	18	<i>New head of CWSS</i> “We have a lot of talent and we should use it”	32	<i>German-Dutch research programme</i> Understanding the Wadden Sea’s complexity	41	<i>Wadden Sea Flyway Initiative</i> Ten years of capacity-building support along the East Atlantic Flyway
04	<i>North Sea offshore wind expansion</i> The Wadden Sea needs an ecosystem-based approach to tackle pressures	20	<i>2024 Summer School</i> A Wadden Sea summer	35	<i>MANABAS COAST</i> Salt marsh management in a changing climate	44	<i>Decision 46 COM 7B.51</i> Wadden Sea (Denmark, Germany, Netherlands) (N 1314ter)
10	<i>Energy transition in the Wadden Sea</i> Balancing energy development and environmental protection	24	<i>Wadden Youth Weekend</i> Youth perspectives and values of the Wadden Sea	36	<i>New Interreg A projects</i> Redefining Wadden Sea tourism	46	<i>Wadden Sea Faces</i> Hans-Ulrich Rösner
13	<i>Wadden Sea Day 2024</i> Green energy development in focus	26	<i>East Atlantic Flyway Youth Forum</i> Participatory science along the Flyway	37	<i>KID project overview</i> Monitoring artificial light	48	<i>2025 Outlook</i>
14	<i>Local story</i> “We learn together”	27	<i>Trilateral Swimway Conference</i> Researching fish migration	38	<i>DARKER SKY project</i> One year of progress and future directions	50	<i>Wadden Sea Board members & advisors</i>

EDITORIAL

DEAR READER

We need an energy transition to address the climate crisis. The North Sea as Europe's future green power plant plays a pivotal role in this development. At the same time this brings a challenging dilemma: How do we balance the rapid development of offshore wind energy with the protection of the Wadden Sea, a natural habitat vital for biodiversity on a global scale?

To add to the conversation, this annual report focuses on the energy transition, cumulative environmental impacts, and how the Trilateral Wadden Sea Cooperation is responding to these developments.

In her lead article, Mathilde Højrup, Senior Adviser at the Ocean Institute, explores the growth of offshore wind energy in the North Sea and the mounting pressures it creates. She advocates for an ecosystem-based approach to planning and management, emphasising the need for collaboration to protect the fragile Wadden Sea.

We also take a closer look at how the Trilateral Wadden Sea Cooperation is addressing these challenges, with special attention to the newly launched

LANICE project. This initiative aims to support the EU's renewable energy goals while safeguarding the Wadden Sea World Heritage Site from potential harm.

In another feature, Göran Sell shares the inspiring story of Borkum, an island in East Frisia, towards achieving carbon neutrality – a path that offers valuable insights for other regions navigating the green transition.

This year's Wadden Sea Day also centred on the evolving role of the North Sea as Europe's green energy hub, discussing both the opportunities and challenges this presents for the Wadden Sea. We've included a recap of the event in this report.

In July, the World Heritage Committee reaffirmed its concerns regarding the potential impacts of renewable energy development on the Wadden Sea's Outstanding Universal Value. The committee's decision calls for a strategic environmental assessment to evaluate the cumulative effects of human activity. We've included the full decision on pages 44-45 for your reference.

We take these concerns seriously and are addressing them through the Trilateral Wadden Sea Cooperation.

This is a complex and ongoing process that will undoubtedly remain a focus in the lead-up to the next Trilateral Governmental Conference in 2026.

We all carry a great responsibility for this One Wadden Sea. As World Heritage, it belongs to us all and we must take care of it together. Therefore, there is a need to strengthen the coordination of our national efforts considering the big picture and the broader context. We have to aim for highest level of ambition possible to achieve our shared goals.

Throughout the report, you will also find updates on various activities of the Trilateral Wadden Sea Cooperation. These include the 2024 Wadden Sea World Heritage Summer School, youth engagement efforts, activities on fish migration, research initiatives, current Interreg projects in the Wadden Sea region, as well as a reflection on a decade of capacity-building along the East Atlantic Flyway.

We wish you an interesting reading.



Anne-Marie Vægter Rasmussen
Chairperson of
the Wadden Sea Board



Anne-Marie Vægter Rasmussen © Miljøstyrelsen

The Trilateral Wadden Sea Cooperation's Annual Report is a publication of the Common Wadden Sea Secretariat (CWSS)
Virchowstr. 1, 26382
Wilhelmshaven, Germany
+49 (0)4421 9108 0
info@waddensea-secretariat.org
www.waddensea-worldheritage.org
Represented by Sascha Klöpfer
Editor-in-Chief Annika Bostelmann
Cover image © unsplash.com/bastiaan
Design by KIRK & HOLM



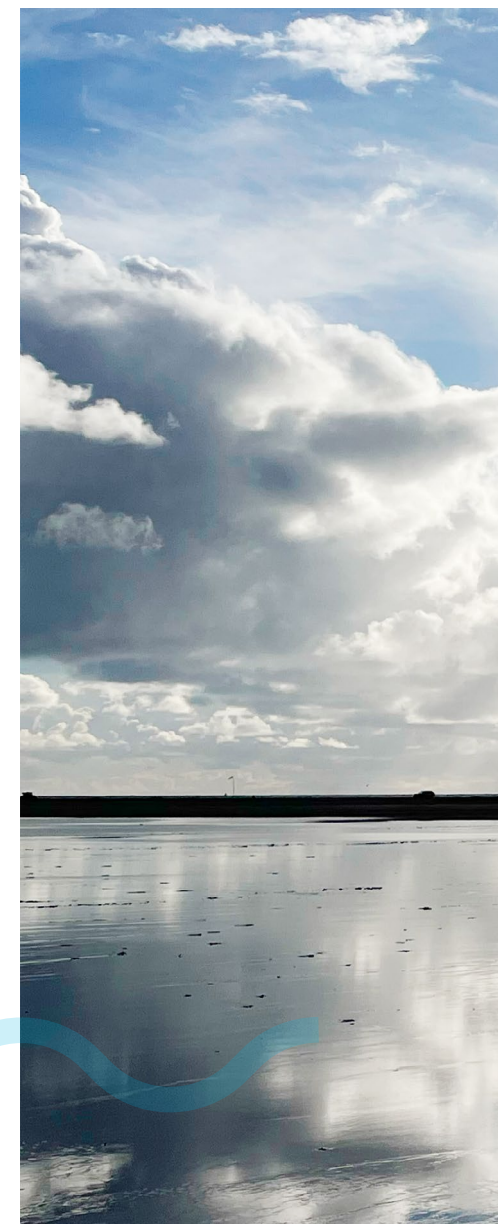


NORTH SEA OFFSHORE WIND EXPANSION

THE WADDEN SEA NEEDS AN ECOSYSTEM-BASED APPROACH TO TACKLE PRESSURES

Denmark, Germany and the Netherlands – as well as other North Sea countries – plan to massively expand offshore wind in the North Sea. While offshore wind farms neither today nor in the future will be located in the Wadden Sea, the area will be an important transit zone between offshore installations and the mainland. As a transit zone, the Wadden Sea will be directly impacted by new subsea cables, pipelines and traffic, but also by the general increase in activity – and thus impacts – in the already heavily utilised North Sea.

The Danish part of the Wadden Sea holds no fewer than eight different designations – several of which are cross-country designations: National Park, Natura 2000 site (Habitats Directive), Natura 2000 site (Birds Directive), UNESCO World Heritage Site, Nature Preservation area, Wildlife reserve, Ramsar site and Particularly Sensitive Sea Area. As part of the Trilateral Sea Cooperation, Denmark, Germany and the Netherlands have worked towards common protection and regulation of the Wadden Sea. Still, the seaside of the area is negatively impacted by different human activities



Mirrored sky during low tide with traffic in the distance © Gyrite Andersen



and in some areas heavily used – in the Danish part for fishing, see [Figure 1](#), and traffic to and from harbours.

Cumulative effects in the Wadden Sea

As a part of the Danish national work on implementing the EU Marine Strategy Framework Directive, the Danish section of Norwegian Institute for Water Research (NIVA) has published a report on the cumulative effects on the Danish marine ecosystems. As is shown in [Figure 2](#) (translated and adjusted from the NIVA report), the Danish part of the Wadden Sea is a heavily impacted area.

Besides commercial fisheries, nutrient enrichment (from land), contaminants (from land) and climate change are some of the main pressures in the North Sea¹. It is in this context, that the expansion of offshore wind and related infrastructure in the North Sea needs to be viewed.

Europe’s new power plant – the North Sea

At the joint Esbjerg Declaration in May 2022, the Netherlands, Belgium, Germany and Denmark set ambitions for expanding offshore wind to at least 150 GW in 2050, calling the North Sea the “Green Power Plant of Europe”. According to the declaration, the offshore wind development will include the production of green hydrogen – both on- and offshore³.

Ideally, the expansion of offshore wind will mitigate the pressure of climate change by decarbonisation, but on a practical and less extensive level the expansion will also add negative pressures on the sea. While it is uncertain to what extent the Wadden

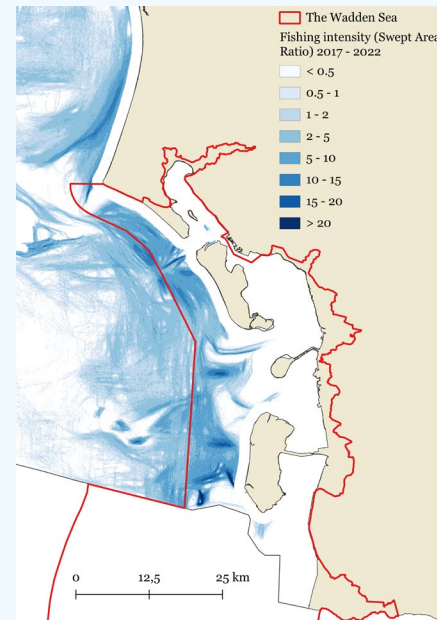
Sea will be negatively affected by typical offshore wind pressures such as collision risks, the area will be directly affected by offshore wind infrastructure crossing the Wadden Sea. This infrastructure will most likely include high voltage subsea cables, pipelines for hydrogen, port extensions and increased ship traffic due to construction and maintenance of offshore wind farms.

Added pressures in the Wadden Sea

The burial, monitoring and maintenance of cables and pipelines will cause physical disturbance of the seabed, turbidity and sedimentation – and thus disturbance and displacement of benthos. In addition, subsea cables can emit heat and electromagnetism – pressures where research about impacts is still lacking. How these pressures will impact habitats and life below water will depend on the ecosystem components in the specific areas, the different methods of laying cables and pipelines and the levels of heat and electromagnetism. Ship traffic can disturb and scare away birds, but also life below water due to noise. An increase in ship traffic and new infrastructure to handle offshore activities might also result in more port extensions including dredging, which also adds to the total impact on the Wadden Sea^{6,2}.

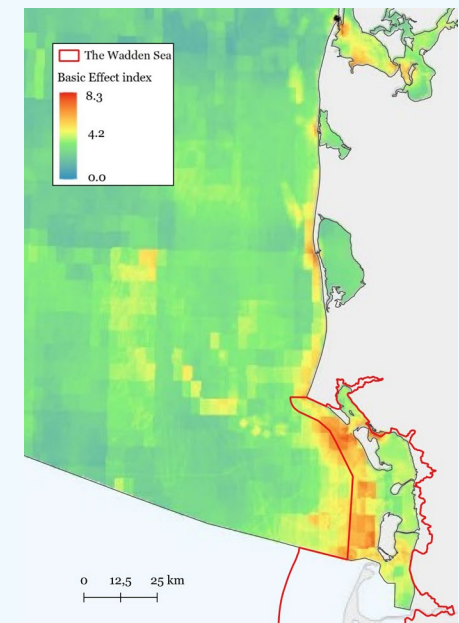
There are several mitigation possibilities when it comes to pressures from offshore wind, and there is a need for ensuring well-planned infrastructure, including avoiding sensitive areas and minimising cable routes, as well as low environmental impact cable laying and environmental monitoring². But besides site-specific mitigation

FIGURE 1 FISHING INTENSITY



The colour graduation depicts how many times a year an area has been impacted by fishing from Danish fishing vessels (<12 m) with bottom contacting mobile gear (yearly average in the period 2017-2022). The Danish part of the Wadden Sea is a preferred area for (brown) shrimp beam trawling, and research show that this fishery has significant negative impacts at the community level on the seabed, with abundance and biomass declining with fishing intensity⁵.

FIGURE 2 INTENSITY AND SPATIAL VARIATION OF ESTIMATED CUMULATIVE EFFECTS (FROM 2016-2020)



The colour scale depicts the basic effect index value. Red highlights the areas with highest basic effect index values which is the result of a combination of pressures and ecosystem components¹.

strategies and planning, there must be a larger focus on cumulative effects and a general ecosystem-based approach to planning all activities across the North Sea countries.

Ecosystem-based approach to planning and management

Environmental management – also in the North Sea – has generally been fragmented and limited to the focus on isolated environmental issues. Environmental issues are often managed individually and without systematic integration of different activities, pressures and the cumulative effects of the combined activities and pressures. While the concepts of an ecosystem-based approach to planning and management is far from new, and while the EU Marine Strategy Framework Directive and the Maritime Spatial Planning Directive are based on it, thorough implementation – especially across countries – is still lacking.

An ecosystem-based approach to planning and management is based on principles originally developed by the UN Convention on Biological Diversity. It focuses on ecosystems, rather than single species, integrates humans and their activities in the ecosystems, is long-term and aims at the protection of lasting ecosystem services. The approach demands a high level of information about activities, pressures, ecosystem components and impacts. Consistent monitoring of the environment and potential effects from the expansion of offshore wind and related infrastructure is thus needed as well as data platforms that integrate


information from various sources and secures availability of data across countries.

Collaborations to tackle challenges

In November 2023, the Greater North Sea Basin Initiative (GNSBI) was established⁴. The initiative is a collaboration between Belgium, Denmark, France, Germany, Ireland, Netherlands, Norway, Sweden and the United Kingdom focusing on solutions to the spatial and environmental challenges in the North Sea in collaboration with the EU Commission. Stakeholder engagement and -feedback is planned to be a part of the initiative (GNSB, 2023). As actors with interest in the marine environment in the Wadden Sea and beyond, the work of GNSB – and input for this work – should be prioritised.

The Trilateral Wadden Sea Cooperation could contribute with local knowledge about the Wadden Sea – but also discussions and recommendations from this year's Wadden Sea Day about offshore wind. While there is a lot of focus on offshore wind – also in the initial discussion in GNSBI – knowledge about the effects of offshore infrastructure and how to minimise environmental impacts from such infrastructure in protected areas is lacking.

The advantage of GNSBI is that it will consist of authorities with expertise in offshore wind and energy in general, but it is essential that the work of GNSBI feeds into the OSPAR commission and the EU in order for recommendations from GNSBI to be

implemented by binding agreements. A close collaboration between OSPAR and GNSBI can become central in ensuring an efficient expansion of offshore wind with substantial environmental considerations including a balancing of activities in the North Sea. Actual stakeholder engagement should be central in the coming work of GNSBI. 

Mathilde Højrup © Frank Lohmann Photography

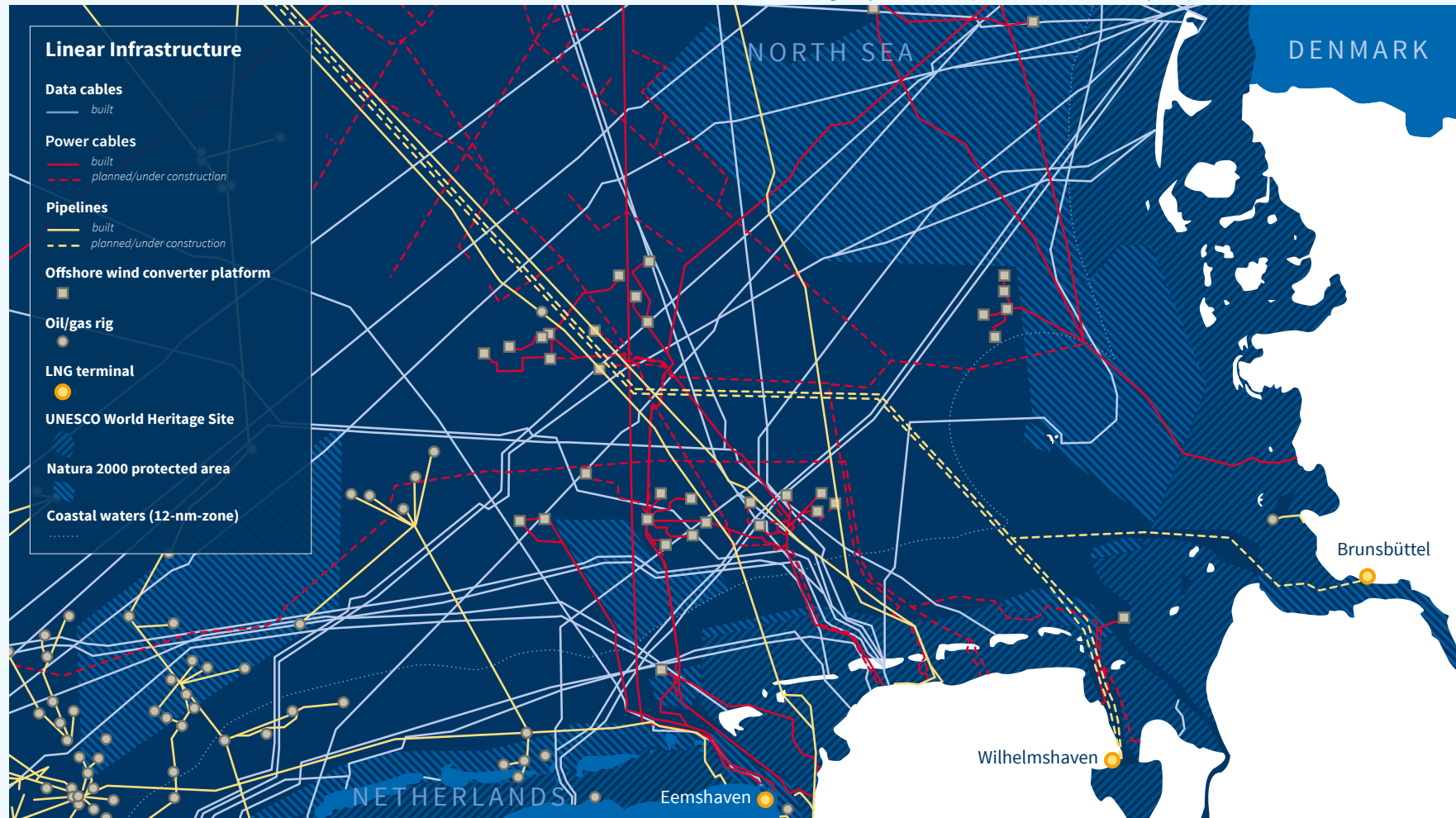


MATHILDE HØJRUP

is a Senior Advisor in the Danish think tank Ocean Institute (Tænk tanken Hav), where she is project leader on the think tank's work on ensuring environmental considerations in relation to offshore renewables and extraction of raw materials from the seas. Ocean Institute is an independent and knowledge-based think tank founded in 2021 with a focus on minimising pollution, ensuring restoration and sustainable use of the seas.

LINEAR INFRASTRUCTURE

Existing and planned linear infrastructure in the German park of the Wadden Sea and North Sea © NABU



REFERENCES

1. Andersen, J., Harvey, E., T., Murray, C., & Özkan, S. (2024). *Samlede påvirkninger i de danske farvande*. Downloaded 10.09.2024. <https://niva-danmark.dk/wp-content/uploads/2024/03/7926-2024-Samlede-paavirkninger-i-de-danske-farvande-.pdf>
2. Christoph, S., Büttger H., Bauer M., Baer J. & Nehls G. (2022). *Energy*. In: *Wadden Sea Quality Status Report*. Eds.: Kloepper S. et al., Common Wadden Sea Secretariat, Wilhelmshaven, Germany. Last updated 01.02.2023. Downloaded 17.09.2024. qsr.waddensea-worldheritage.org/reports/energy
3. *The Esbjerg Declaration (2022). The Esbjerg Declaration on The North Sea as a Green Power Plant of Europe*. Downloaded 13.09.2024. [https://www.kefm.dk/Media/637884617580584404/The%20Esbjerg%20Declaration%20\(002\).pdf](https://www.kefm.dk/Media/637884617580584404/The%20Esbjerg%20Declaration%20(002).pdf)
4. *Greater North Sea Basin Initiative (GNSBI) (2023). Ministerial conclusions. Adopted 21 November 2023 by Belgium, Denmark, France, Germany, Ireland, Netherlands, Norway, Sweden, United Kingdom*. Downloaded 16.02.2023. <https://maritime-spatial-planning.ec.europa.eu/media/document/15065>
5. McLaverty, C., Dinesen, G. E., Eigaard, O. R., Olsen, J., Brooks, M. E., Beukhof, E., Bromhall, K., Egekvist, J., van Denderen, P. D., Kokkalis, A., Reijden, K. J. V. D., Stounberg, J., & Petersen, J. K. (2023). *Effects of coastal fisheries on benthic fauna*. DTU Aqua. DTU Aqua-rapport No. 440-2023
6. Svendsen, J.C., Ibanez-Erquiagai, B., Savina, E. & Wilms, T. (2022). *Effects of operational offshore wind farms on fishes and fisheries. Review report*. DTU Aqua Report no. 411-2022. National Institute of Aquatic Resources, Technical University of Denmark, 62 pp



ENERGY TRANSITION IN THE WADDEN SEA

BALANCING ENERGY DEVELOPMENT WITH ENVIRONMENTAL PRESERVATION

The energy transition in and around the Wadden Sea requires careful planning and adherence to the highest environmental standards. This approach is vital to protect the unique ecosystem while advancing Europe's energy goals. The Trilateral Wadden Sea Cooperation (TWSC) is committed to supporting a sustainable energy transition in the Wadden Sea by fostering collaboration between the energy sector and environmental stakeholders across Denmark, Germany, and the Netherlands. This cooperative approach aims to support energy development projects in preserving the ecological integrity of the Wadden Sea, a UNESCO World Heritage Site.

At the North Sea Summit II in May 2022, the Heads of State of the North Sea coastal states signed the Esbjerg Declaration which contains the political intention to develop the North Sea as a "Green Power Plant [...]" while promoting balanced co-existence of renewable energy and a healthy marine ecosystem" as a principle, stated by the energy ministers of Denmark, Germany, the Netherlands, and Belgium. In their Ostend Declaration (April 2023), the energy ministers (including Denmark, Germany, and the Netherlands) reaffirmed in this context that "To this end, renewable energy should serve public interest and public safety while promoting balanced co-existence of

renewable energy, biodiversity and environmental protection as well as to contribute to a healthy marine ecosystem."

Encouraging the development of renewable energy across the European Union, the Renewable Energy Directive (2023) requires member states to increase their share of green energy while upholding environmental standards. This is especially relevant in sensitive areas like the Wadden Sea, recognised by UNESCO under the World Heritage Convention. Other directives, such as the Offshore Safety Directive and Environmental Impact Assessment (EIA) Directive, further advocate for

safety protocols and environmental assessments for renewable energy projects, highlighting the need for mitigation of their impact on ecosystems. In line with the 2022 Esbjerg Declaration's principles, and the trilateral 2023 Wilhelmshaven Declaration, these directives inform the management plans and policies of the TWSC, supporting energy developments to align with the protection and sustainable use of the Wadden Sea.

Furthermore, one of the recent requests from the World Heritage Committee during its July 2024 session is for a trilateral approach to the planning and implementation

of projects that connect offshore infrastructures with the mainland. This approach aims to avoid negative impacts on the Outstanding Universal Value (OUV) of the property. Within the boundaries of the World Heritage Site, new installations, as well as oil and gas exploration are prohibited, as stated in the Wilhelmshaven Declaration.

The SIMP Integrated Management Plan for One Wadden Sea World Heritage (SIMP) is a key tool in the TWSC's efforts to protect the Wadden Sea World Heritage Site. The strategic document aims to stimulate new and continue to support coordinated efforts trilaterally. On

ACTIVITIES OF THE PROJECT LANICE

North Sea wide acceleration of LANding offshore energy while mitigating Impact on the Coastal Environment



energy, it can be used for strategic decision making, for guiding projects and activities that support a nature friendly transition. The trilaterally agreed objective is to intensify the application of common best practices to protect the Wadden Sea, to support a nature-friendly energy transition with the highest applied environmental standards for all three countries in a collaborative approach with the energy sector.

The SIMP proposes trilaterally agreed activities like maintaining collaborations between site managers and energy agencies and companies, promoting trilateral exchange, evaluation of the effects of energy production whilst applying the precautionary principle and formulating relevant research questions.

Monitoring and Adapting to Change

Tracking developments in the energy sector is essential for understanding the impact of energy projects on the Wadden Sea ecosystem. The 2022 Quality Status Report (QSR) on Energy provides insights into energy-related activities in the Wadden Sea, including field studies, models, reviews, maps, plans and agreements.

By summarising the effects of offshore wind farms, tidal energy projects, oil and gas extraction, and other energy installations, the report highlights key potential risks that need attention, including noise reduction and awareness of migratory routes. It supports the TWSC in recommending adaptive management practices, responding to emerging challenges, and refining policies to enhance

sustainability. Further, it supports the TWSC's aim to ensure that the Wadden Sea remains a thriving habitat as it undergoes the transition to renewable energy.

Collaborative efforts and strategic projects

The TWSC ad-hoc Working Group Renewable Energy, part of the Task Group Coordination and Management, plays a crucial role in implementing the SIMP's energy-related initiatives. This group includes experts from Denmark, Germany, and the Netherlands to advise or support on the best practices of future implementation of renewable energy.


The group is also involved in the new TWSC project “North Sea wide acceleration of LANding offshore energy while mitigating Impact on the Coastal Environment”, LANICE in short. Co-funded by the NextGeneration EU project via the Dutch Ministry of Agriculture, Fisheries, Food Security and Nature (LVVN), LANICE supports the achievement of the EU renewable energy targets whilst mitigating climate change and preserving the Wadden Sea World Heritage Site. The project comprises five key activities: 1) Reviewing potential impacts of grid connections and identifying mitigation actions; 2a) reviewing mitigation options and 2b) developing an online mitigation toolbox; 3) identifying conflicts and acceleration potential for the transmission grid; 4) assessing stakeholder needs in planning, permission and implementation and maintenance and 5) facilitating exchange with target groups on environmental impact, mitigation and acceleration.

Since LANICE's launch in March 2024, activities 1 and 2a) have been co-organised by a trilateral consortium of external experts, led by Dutch consultancy Witteveen+Bos and including Deltares (Netherlands), DHI (Denmark and Germany), Intertek (UK), and NIRAS (Denmark). They organised a workshop on 18 September 2024 that brought together some 35 representatives from Denmark, Germany, and the Netherlands, including planning and environmental authorities, government agencies, NGOs, researchers, and private sector experts. The event aimed to provide a unique collaborative platform for participants to gain insights and share the latest research and practical approaches to reducing

environmental impacts. Additionally, it facilitated interdisciplinary discussions and cross-border knowledge exchange to enhance the planning and implementation of projects connecting offshore energy infrastructure to the mainland. Key outcomes of the event included contributions to developing a joint strategic and systematic approach to minimise negative impacts on the natural values of the Wadden Sea World Heritage Site. A progress report outlining knowledge gaps and the different environmental impact assessments in all three Wadden Sea countries is expected by the end of 2024. LANICE is planned to run for two years with a budget of €500,000 from LVVN and €85,000 from the TWSC.

Outlook

The TWSC aims to continue to deepen its knowledge of the impacts of the green energy transition on the Wadden Sea. This commitment involves persistent exchanges with the energy sector, competent authorities, and other stakeholders, as emphasised in the Wilhelmshaven Declaration and in the SIMP.

By employing a collaborative, science-based approach and utilising tools like the QSR and SIMP, the TWSC aims to balance the demands of the energy transition with the need to preserve the Wadden Sea's unique natural heritage. This integrated strategy strives to ensure that the Wadden Sea remains a vibrant and resilient ecosystem even as it navigates the path to a more sustainable energy future. 

The vibration cable plough is a laying tool utilised for tidal flats © Bohlen & Doyen



WADDEN SEA DAY 2024

GREEN ENERGY DEVELOPMENT IN FOCUS

Jointly organised by the Common Wadden Sea Secretariat (CWSS) and the Lower Saxon Wadden Sea National Park Authority, the Wadden Sea Day in Wilhelmshaven has served as a platform for discussions on the future of the Wadden Sea since 2006. This year's event on 29 August brought together more than 120 representatives from science, nature conservation, and politics under the theme: "Safeguarding the Wadden Sea: Navigating Green Energy Development in the North Sea." Discussions centred on the challenges and opportunities posed by the North Sea's emergence as Europe's green energy hub, as well as the potential impacts on the Wadden Sea.

Opening the meeting, Anne-Marie Vægter Rasmussen, Chairperson of

the Wadden Sea Board, stated, "The Wadden Sea is one of the world's most valuable nature areas, and we must protect it. However, the need for a green energy transition in the North Sea is undeniable. The challenge of balancing these two concerns will guide our work for years to come."

The 2023 and 2024 decisions of the UNESCO World Heritage Committee have expressed concerns about the impacts of energy development on the Wadden Sea. This year's Wadden Sea Day addressed essential questions: What is required to develop the North Sea as Europe's green power plant? How can these developments be managed to minimise their environmental impact? What spatial and technical solutions can be implemented? This year's meeting marked an interesting starting

point for further discussion and problem solving. Therefore, bringing together experts from all disciplines to collaborate openly is essential for achieving green energy targets whilst protecting the biodiversity of the Wadden Sea and its intrinsic high natural value.

Keynote speakers Tobias Grindsted of the Danish Energy Agency and Timo Kahl from TenneT TSO GmbH highlighted the importance of collaboration and innovation, along with the growing need for green energy. Grindsted emphasised the significance of large-scale offshore renewable energy development for energy security and climate goals, while Kahl noted TenneT's efforts to minimise impacts on the Wadden Sea through technological advancements in offshore grid connections.



Peter Südbeck, Director of the Lower Saxon Wadden Sea National Park Authority, stressed the importance of reducing environmental impacts through innovative technical solutions: "We must maintain our environmental standards as we expand renewable energy infrastructure. Smart placement of cables and continuous exploration of new technologies are key to safeguarding the Wadden Sea."

The next Wadden Sea Day is planned for 28 August 2025.

Germany's first seawater source heat exchanger was installed in Borkum's harbour this summer © Nordseeheilbad Borkum GmbH



LOCAL STORY

“WE LEARN TOGETHER”

Borkum aims to become the first CO₂-neutral island in the Wadden Sea by 2030. One of the initiators of this ambitious target is Göran Sell, Managing Director of Nordseeheilbad Borkum GmbH since 2014. As head of the ‘Lebensraum Borkum 2030+’ project, the lawyer and MBA created the strategic framework to implement a series of concrete measures for building a climate-resilient island, supported by a strong cross-border network. In an August interview with CWSS, Göran, now leaving Borkum after ten years to explore new horizons, reflected on the project’s achievements and discussed the challenges, plans, and visions for the East Frisian Island, home to 5,300 residents and visited by about 300,000 overnight guests per year.

What is “Lebensraum Borkum 2030+” all about?

“Lebensraum Borkum 2030+”, (Lebensraum is German for habitat) is our island development strategy, with one of the aims being to achieve emission neutrality by 2030. The

strategy is a direct successor of the island’s 2015-16 tourism strategy “Borkum 2030”, which included a vision of achieving a high quality of life as well as climate neutrality and energy independence, which is also part of the current strategy. Back then we recognised that the tourism sector is a substantial contributor to global carbon emissions and therefore we carry a responsibility to help reduce carbon emissions. In the past decade, our understanding of tourism has evolved from viewing it as a distinct industry to recognising it as an interdisciplinary and integrative force that shapes livelihoods. So, when the revision period of 2021-22 came, we opted for a holistic island development plan, in which tourism is an integrative part. The result is “Lebensraum Borkum 2030+”, which we are currently implementing through several projects.

How far are you now in achieving this aim?

It is ambitious but compared to other municipalities dedicated to climate neutrality we have come extremely far.

With the “Islander” project, we have become a Europe-wide pilot location for the implementation of the energy transition. The project aims to build up a holistic perspective on decarbonising an island ranging from questions about the distribution of green energy to shaping consumer behaviour. There are many international subprojects combined in “Islander”. For example, we are developing an island-specific digital platform to connect consumers with energy producers. This summer, we installed Germany’s first seawater source heat pump in Borkum’s harbour. Using warmer seawater in motion has proven to be more efficient than extracting heat from the ground or air. However, keeping mussels and algae off the exchange areas is a challenge. We are also building a hydrogen infrastructure to transform the island’s transport mobility.

What are you doing to reduce carbon emissions in tourism?

When an island lives almost solely off tourism, the tourism sector must address its role in reducing energy consumption. We are a pilot destination of the German Climate Fund Tourism. Within that fund, our tourism actors can generate their current emissions balance sheet together with the Potsdam Institute for Climate Impact Research, free of charge. With that information they can identify the best actions to successively reduce their carbon footprints. The National Park partner arthotel bakker, for instance, is looking into solutions to become climate neutral and serves as one of the positive exemplar cases for others. We need best practices here on the island, to be a driving force.



Borkum's freshwater source is protected by its dunes © Nordseeheilbad Borkum GmbH

How do international exchange and being part of a transboundary Wadden Sea Region support your endeavour?

We often work in German-Dutch projects. In addition, we have been partnering in projects with a wider scope with five to seven European countries involved, such as “Islander” and “Nessie”. For me, it is absolutely enriching to see how different cultures deal with similar or the same challenges. In joint projects, we learn together. For example, when Germans tend to overthink and over plan, I have seen Dutch just dive in and then get halted by problems they didn’t anticipate. The golden rule probably lies somewhere in the middle. Seeing different approaches helps reevaluate one’s own path and we have grown closer. Now, if I have a question regarding Ameland, I know just who to call, write, or visit. The connections bear a lot of fruit and they are great fun.

What is the Wadden Sea’s role in Borkum’s energy transition?

The Wadden Sea poses a challenge to our energy transition efforts. We consume 30 GWh electricity and 120 GWh gas in a year. If we were to simply substitute gas with more electricity, we would need a lot more cables to the mainland – a major intervention in the Wadden Sea. Energy transition does not solely concern us, but also the other Wadden Sea islands. Hence, we need to look for solutions on the island, such as the seawater source heat pump. We have also checked the promising feasibility of geothermal drilling on the island and are currently looking into funding the test drillings.

How does the World Heritage designation shape your work?

I expect that everyone on Borkum has a different answer to this, but I personally regard the designations as Biosphere Reserve, National Park, and World Heritage Site as obligations that spur our activities towards climate neutrality. Another external pull is the Sylt Declaration of 2010 with the aim of making the Wadden Sea Region climate neutral by 2030. Borkum will be the first area of Germany to be hit by stronger Atlantic waves, so climate protection is existential to us. Will the island be covered by the sea in 2100? Will our freshwater reserves be inundated by salt water, changing the way we live on Borkum? Storm frequency and intensity has already increased. The World Heritage title helps communicate this urgency. We can see that with the gas extraction plans off Borkum, people are watchful. However, I also see a conflict of livelihood and nature protection. For example, in the National Park we want to let nature be nature. But what if this means that the dunes protecting our freshwater supply will give way to Wadden Sea dynamics? There are still many questions to find answers to.



Portrait of Göran Sell © Borkum Portrait

Borkum invests in green energy sources, from seawater heating via hydrogen fuel to solar panels © Torsten Darchwitz



BORKUM IS ENGAGED IN MANY EU PROJECTS AIMED AT ITS GOAL OF BECOMING CLIMATE NEUTRAL BY 2030. HERE IS A SELECTION:



ISLANDER paves the way for **the decarbonisation of EU islands' energy systems** by demonstrating smart grid solutions combining renewable energy production with storage technologies in real-life settings on the Pilot island of Borkum. The project aims to replicate these solutions to four Follower Islands Lefkada and Skopelos in Greece, Orkney in the UK, and Cres in Croatia, and to other EU islands. ISLANDER is composed of eleven organisations from seven European countries committed to the community led energy transition of EU islands. Project duration: October 2020 – September 2025. Total grant budget € 8.3M, co-funded with € 7M by the European Commission. www.islander-project.eu



NESSIE (NEw Skills & Spaces Impulse for the Education of aspirant energy-transition installers) aims to acquire more staff and accelerate knowledge transfer to professionals. The project will achieve this by developing and implementing innovative recruitment campaigns and new educational modules based on local, regional, and international best practices. Pilots: Ameland, Borkum, Samsø, and Morbihan. Project duration: January 2024 – January 2027. Total grant budget: € 3.3M. www.interregnorthsea.eu/nessie



E-MobiSS (E-mobility in seaports and marinas) investigated the technical framework conditions in harbour locations for the conversion of recreational shipping to fossil-free alternatives with a focus on the use of batteries. In addition, a comprehensive supply of the Lower Saxony Wadden Sea coast, including the Hamburg Wadden Sea, with electric charging infrastructure, was conceptualised and described. The final report was published in September 2024. www.lebensraum-borkum.de/E-MobiSS



H2Watt was a 2021–2022 Interreg project aimed at preparing the economy on both sides of the border in a cross-sectoral manner for the new requirements and potential arising from the introduction of hydrogen. In addition, the technological development (gas station, storage, an electrolyser, and a fuel cell to regenerate electricity) and the transfer of knowledge in the field of hydrogen economy was promoted. The implementation of the innovation projects was focused on the islands of Borkum and Ameland. www.h2watt.eu



SAVE (Samen voor de energietransitie) was a 2021–2022 Interreg project aimed at **increasing support for and participation of citizens and companies in the energy transition**. The focus of the project was on the expansion of renewable energies and hydrogen applications. www.interregv.deutschland-nederland.eu/en/project/save-samen-voor-de-energietransitie-2/

NEW HEAD OF CWSS

**“WE HAVE
A LOT OF
TALENT AND
WE SHOULD
USE IT”**

“This is part of our ambition to further involve young people as the next generation committed to protecting the Wadden Sea”



Sascha Klöpfer has been working at CWSS since 2012. In March 2024 he officially took over as Executive Secretary © CWSS/ Domnick





In February, the Trilateral Wadden Sea Cooperation of Denmark, Germany, and the Netherlands appointed Sascha Klöpfer as new Executive Secretary of the Common Wadden Sea Secretariat (CWSS). The marine biologist has been working at the Secretariat for over a decade and had already held the position of the Executive Secretary on an interim basis since June 2023.

You have been at CWSS since 2012. What brought you here and what have been your topics till now?

My topical focus was originally on harmful phytoplankton blooms taking me to Vietnam, Indonesia, and the Mediterranean on research – but also to the Wadden Sea and North Sea. I always found it attractive “to work at your front door”. I stepped out of classic research when I joined the Scottish Environment Agency in Edinburgh to monitor phytoplankton within the Water Framework Directive. After leading the programme for some time, I was considering moving back to Germany

and was delighted to be offered the position as Scientific Officer for Monitoring and Assessment at CWSS.

TMAP was, and still is, one of the cornerstones of the Cooperation, but after the challenges we have seen for example with data delivery, there is a strong need to bring it back to life. I believe we are on the right track now. I've also dealt with the issues of alien species, marine mammals, shipping, salt marshes and dunes. More recently, I have been the secretary of the Trilateral Programming Committee for Wadden Sea Research that works on bringing the Trilateral Research Agenda to life. For example, this group supported the creation of the current Wadden Sea research programme by the Netherlands and Germany – the first of its kind in the trilateral context.

You have been CWSS's acting Executive Secretary already since June 2023. How would you sum up the past year?

It was an exciting period, largely shaped by the recent exchange with

UNESCO. I am really proud of my colleagues at the Secretariat and of how they deal with the daily tasks while managing to accommodate the “homework” given by the World Heritage Committee. With the ongoing development of the Strategic Environmental Assessment and UNESCO's updated requests adopted this July, it has evolved into a mid-term challenge for our work. I think one of the main lessons of this development is that we need to be more precise in how exactly activities affecting the Wadden Sea's Outstanding Universal Value will be dealt with in order to protect its integrity.

What new sides of the Cooperation have you discovered since taking office?

Obviously, after twelve years, the number of surprises has become rather limited. Nevertheless, I have found myself immersing in topics that present new challenges to me: World Heritage affairs, international cooperation beyond the trilateral

borders, but also in daily tasks I like to call housekeeping. While challenging, I really enjoy the complexity and versatility of these tasks.


What will be your priorities for the Cooperation in the next years? Where do you see its main challenges?

I already mentioned the World Heritage Committee's decision, but we shouldn't forget, by any means, the manifold tasks given to us in the Wilhelmshaven Declaration. To name just two, we are implementing the integrated management plan, a more recent cornerstone document of the Cooperation. Energy – and all conservation aspects of its generation – is one of the key topics of that plan. And in August 2024, we quite successfully organised the first Wadden Sea World Heritage Summer School with great support of colleagues from the three Wadden Sea states – and we are aiming to develop the school into an annual format. This is part of our ambition to further involve young people as

the next generation committed to protecting the Wadden Sea.

What will be your priorities for CWSS?

I want the Secretariat to develop a healthy self-confidence in its central role within the Trilateral Cooperation. We have a wealth of talent in our team, and we should use it. Our diverse staff helps us to deal with the multi-faceted task of implementing the Wilhelmshaven Declaration. We are also very well-equipped for outside-the-box thinking, for example when looking for new opportunities of exchange in science and research as well as beyond the Wadden Sea. We should take pride in these qualities.

Another priority is navigating the shift we are currently experiencing. The initial excitement of becoming a World Heritage Site is being replaced by the need for concrete actions to safeguard the Wadden Sea's OUV and integrity. With this, comes new tasks and topics for us as Secretariat to address. 

2024 SUMMER SCHOOL

A WADDEN SEA SUMMER



In August, the East-Frisian Island of Borkum hosted 18 Bachelor's, Master's, and PhD students from the Wadden Sea countries and beyond. The students took part in the inaugural Wadden Sea World Heritage Summer School, organised under the Trilateral Wadden Sea Cooperation (TWSC). Over the ten-day programme, they delved into the complexity of the ecology, nature conservation, sustainable

development, and management of the Wadden Sea through a series of lectures, field visits, and collaborative solution-seeking. They presented their findings at the 2024 Wadden Sea Day in Wilhelmshaven.

The summer school attracted students from a variety of disciplines, including biology, ecology, economics, management, law, tourism, and design. Despite their diverse academic

backgrounds, a strong group dynamic quickly emerged. "I was highly impressed by how quickly the group came together," remarked Sabrina Seeler, a lecturer from FH Westküste University of Applied Sciences (Heide, Germany). "Everyone was engaged in meaningful discussions right from the start, without the need for any icebreaker activities. This dynamic lasted throughout the programme, making it a joy to work with them."



Wetlands and forest can also be found on Borkum © Konstantina Apostolopoulou



Mudflat research methods were also part of the curriculum © Konstantina Apostolopoulou

The group gathered in Emden on 20 August before travelling together to Borkum. There, they engaged in an intensive programme that combined expert-led lectures with hands-on fieldwork and interdisciplinary collaboration. The curriculum, which encompassed environmental

science, social sciences, economics, and governance, aimed to provide a comprehensive understanding of the multi-faceted challenges facing the Wadden Sea. The students worked on three case studies, each with the unique circumstances of Borkum as an example: biodiversity, climate change, and tourism.



Jakob Hansen © Katharina Greitemann

JAKOB HANSEN

Biology student at the University of Southern Denmark

“During the Wadden Sea summer school, I’ve learned how complex even seemingly simple problems can be, because so many different stakeholders are involved. The stakeholders all have different interests, making it difficult to reconcile them all. But communication can help bridge these differences and lead to successful outcomes.”



Annika Greve © Katharina Greitemann

ANNIKA GREVE

Studying marine ecology at Aarhus University

“I chose to attend the summer school to connect with people from various countries, particularly those with ties to the Wadden Sea. I think it is incredibly inspiring to see how the different nations deal with laws and develop strategies to protect the Wadden Sea in the best way possible. By learning from the best practices of all three countries, we can create a more effective and unified approach to conserving the Wadden Sea.”



Nika van Asselt © Birte Leutelt

NIKA VAN ASSELT

Studying coastal and marine management at the Hogeschool van Hall Larenstein

“During our case study in the summer school, we explored the effects of climate change on Borkum. I learned a lot about the conflicting evidence surrounding different effects on the island, especially regarding the freshwater lens. What I found interesting is how much research is still needed – specifically, understanding the exact impact and whether it is shrinking or growing. That’s why I think the information we gathered about Borkum were really interesting compared to other Wadden Sea islands I’ve researched. I feel I’ve gained a lot of knowledge and will definitely take these learnings along with me.”

The first case study centred on harbour seals, a keystone species in the Wadden Sea ecosystem. These seals use the sandbanks of the Wadden Sea, including one in the northwest of Borkum, as haul-out sites. In the 1980s, this particular sandbank was not connected to the island, but natural processes in the Wadden Sea gradually brought it closer, eventually merging it with Borkum. Initially, the number of seals using the sandbank increased, in line with the overall growth of the seal population in the Wadden Sea. However, in recent years, the seal population has declined, raising concerns that the sandbank may be abandoned in the future. During the summer school, students explored potential management strategies for Borkum’s seal population. They focused on educational initiatives and citizen science, as human disturbance was identified as a significant threat to the seals. The aim was to develop solutions that would mitigate these threats while highlighting the ecological importance and value of seals in the region.

The second case study explored the future supply and distribution of freshwater to Borkum, an island that fully relies on precipitation to provide freshwater to its inhabitants and tourists. The students mapped the local sources and sinks of freshwater, and explored various potential conflicting demands (e.g., nature conservation of dunes lakes versus ample drinking water supply for tourist accommodations). They considered the consequences of freshwater being extracted from two different dune areas at either side of the island for

natural and socio-economical values, and took the impacts of climate change into account when looking for future problems and solutions.

The third case study looked at nature-based behaviour and sustainable tourism development in the Wadden Sea region, particularly on the island of Borkum. Students thoroughly analysed the complex tourism ecosystem, discussed the roles and responsibilities of the diverse stakeholders involved in tourism development in the region, and critically evaluated their interaction and dependencies. While they came across multifaceted value paradoxes and areas of tensions between central stakeholders, they developed possible pathways to ensure that tourism development positively contributes to the much-needed sustainability transformation.

The Wadden Sea World Heritage Summer School was designed to provide participants with a deeper understanding of the challenges and complexities of conserving and managing the Wadden Sea. It also offered a valuable opportunity to network with leading scientists, site managers, and fellow students, fostering a community of future leaders in natural world heritage conservation. “With the enthusiastic feedback we’ve received, I believe we not only succeeded in educating participants about the complexities of Wadden Sea conservation, management, and governance, but also in providing a platform of meaningful engagement with professionals in the field. We hope this summer school has helped

to cultivate a new generation of dedicated guardians of natural world heritage”, stated Cristina Nazzari, co-organiser from the Common Wadden Sea Secretariat.

The Wadden Sea World Heritage Summer School 2024 was a collaborative effort of the Alfred Wegener Institute, the FH Westküste University of Applied Sciences, the Common Wadden Sea Secretariat, the Lower Saxon Wadden Sea National Park Authority, the Danish Wadden Sea National Park, and the Waddenacademie. It was supported by the Trilateral Programming Committee on Wadden Sea Research and the Partnership Hub under the framework of the Trilateral Wadden Sea Cooperation.

The next summer school is scheduled to take place in the Danish Wadden Sea Region, on the North Frisian Island of Sylt, and in Wilhelmshaven, from 18 to 29 August 2025. 

THE STUDENTS PRODUCED A VIDEO CLIP WRAPPING UP THEIR DAYS ON BORKUM SHOWCASED AT THE WADDEN SEA DAY



WADDEN YOUTH WEEKEND

YOUTH PERSPECTIVES AND VALUES OF THE WADDEN SEA

“We quickly learned that there are many efforts to protect the World Heritage Site, and we were very interested to find out how we could contribute to its protection and development.”



The group of young nature conservationists is committed to further enhance the trilateral youth network © Pascal Ertzinger



From 9 to 12 May 2024, 40 young adults, engaged and passionate about the Wadden Sea region, gathered on the Dutch Island of Schiermonnikoog for the Trilateral Wadden Sea Youth Weekend. The event, themed “Our Perspectives and Values of the Wadden Sea”, aimed to foster dialogue, strengthen the recently established Wadden Youth Network, and engage participants in discussions on how to contribute to the preservation of the Wadden Sea World Heritage Site.

The Wadden Youth Weekend is a result of the Trilateral Wadden Youth Conference held in September 2022. With the support of the Trilateral Wadden Sea Cooperation (TWSC) and the Common Wadden Sea Secretariat (CWSS), a group of committed nature conservationists decided to plan this follow-up event. The involvement of young people in politics and nature conservation is important because the issues that affect the future will affect young people the most, so it is essential that they are involved in tackling them. This is why a network of young people dedicated to these causes and area is needed – especially across the three states, as the World Heritage Site does not stop at national borders but transcends them.

Welcome to Schiermonnikoog

After travelling to the island and getting to know each other, we were introduced to the background of the network and the weekend’s programme. We quickly learnt that there are many efforts to protect the World Heritage Site, and we were very interested to find out how we could contribute to its protection and development.

Collecting inspiration and views

Our programme included talks from local stakeholders in the area about their values in relation to the Wadden Sea. Sander van Dijk and Eva Nogue Astier spoke about their work at the Seal Centre Pieterburen and their perceptions of the Wadden Sea. During our conversation a common theme emerged: the shared responsibility to protect this unique area and to raise awareness of the threats it faces. Schiermonnikoog local Thijs van der Berg introduced us to the Royal Netherlands Sea Rescue Institution (KNRM), where he works as a volunteer. He talked about the activities of the KNRM and the importance of volunteers. From a local perspective, he also shared his concerns about the trend of tourists demanding more entertainment instead of enjoying nature. The beauty of nature is an aspect of the Wadden Sea that he values, and that we, as a young network, wholeheartedly agreed.

Speaking of the Wadden Sea, we also went out to get inspiration from the source itself. The nature conservation organisation on Schiermonnikoog took us on a mudflat walk. While for some of us the excursion was the first mudflat hike, others had already led trips on the mudflats themselves. Regardless of previous experience, we all enjoyed experiencing the diversity of the life in the mudflats. Another incredible natural highlight was the northern lights, which we witnessed during an evening on the beach.

Defining our values and future

With all the inspiration taken from the talks and nature, as well as some

insights into the workings of existing international and regional networks, we got to work. We brainstormed our own values for the Wadden Sea and started to lay the foundations for our network. What exactly do we want to do? What about communication? How can we fund our activities? All these questions generated numerous ideas that provided the first foundation for further development.

Next, we discussed our future plans and how to ensure a regular exchange. We agreed to hold regular monthly meetings to keep the momentum going.

We see the weekend as a kick start for the network, bringing in more participants and opening up new as well as different possibilities. After the weekend, we started to have regular meetings to continue working on

building a transnational and dynamic network. For the future we hope that more young people will get to know us and that we can grow as a network where many young people can share their knowledge and values for our common Wadden Sea World Heritage.

Get in touch with us 

The participants drew inspiration from nature experiences on Schiermonnikoog © CWSS/ Nazzari



EAST ATLANTIC FLYWAY YOUTH FORUM

PARTICIPATORY SCIENCE ALONG THE FLYWAY

Held virtually on 14-15 September 2024, the East Atlantic Flyway Youth Forum brought together young conservationists aged 18-30 from across the flyway to explore opportunities and challenges of citizen science projects (or participatory science). Organised by the Common Wadden Sea Secretariat through the Wadden Sea Flyway Initiative, Migratory Birds for People, and Youth Engaged in Wetlands, this was the 4th annual East Atlantic Youth Forum.

Kristine Meise, Wadden Sea Flyway Initiative Officer: "With the East Atlantic Flyway Youth Forum, we aim to provide networking and training opportunities to inspire new generations of conservationists to make positive changes in flyway conservation. Given the scale of issues migratory birds are facing, we need to work closely with many stakeholders. The goal of this year's forum was to learn how best to engage the public with different opinions and visions in science and conservation efforts."

The forum began by exploring the intersection of ecological issues and social justice in participatory engagement. Participants were encouraged to rethink how people engage with each other and their environment. The session highlighted the importance of citizen science and science communication to bridge the gap between science and society. Attendees explored socio-ecological learning, recognising that meaningful change requires a shift in knowledge, skills, and attitudes across individuals, groups, and institutions.

The focus then shifted to defining community and promoting inclusive engagement to ensure no one is left behind, in recognition that diversity is a key element in citizen science that leads to transformative change based on local needs and a bottom-up approach. The session also introduced the "Ten Principles of Citizen Science" according to the European Citizen Science Association as well as relevant adjustments for community work, encouraging attendees to apply them in their own work.

The last session addressed the ethical considerations of working with communities, emphasising research integrity and the challenges that arise. Participants learned about the ethical circle, which connects concerns from the individual to the community and the global public. The session delved into the importance of building trust, capturing authentic voices, and maintaining care in conservation work.

Both days concluded with inspiring examples of successful citizen projects across the East Atlantic Flyway, encouraging young people to act.

The next East Atlantic Flyway Youth Forum is planned for September 2025. 

The EAF Youth Forum event series supports young conservationists along the flyway © Katharina Greitemann



TRILATERAL SWIMWAY CONFERENCE

RESEARCHING FISH MIGRATION

150 leading fish migration experts from the Wadden Sea region gathered in Groningen, Netherlands, from 17-19 April 2024 for the second Trilateral Swimway Conference. Dedicated to understanding and preserving diverse fish life cycles in the world's largest unbroken tidal flats system, the symposium featured the latest research and discussions on measures to uphold and restore the viability of fish populations within the Wadden Sea. The key question was how to tackle the multifaceted challenges confronting migrating fish through management.

The conference provided a platform for experts from various fields to discuss the latest scientific research and insights on management measures. They agreed that awareness of fish as an essential component of the Wadden Sea has drastically improved since 2019, when the inaugural Swimway Conference was held. It is widely recognised that protecting fish in this World Heritage

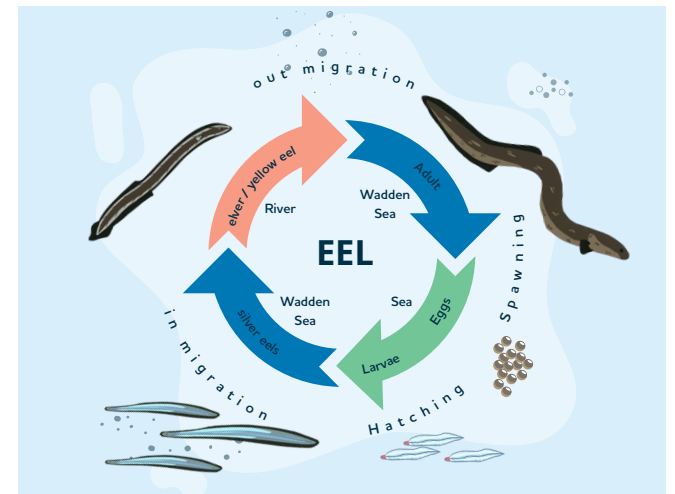
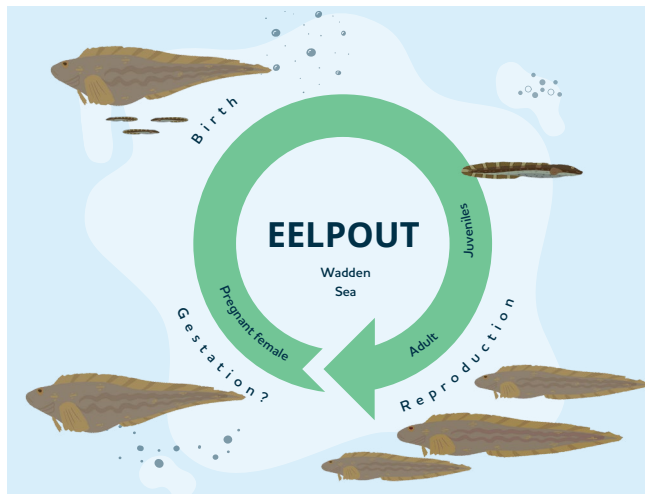
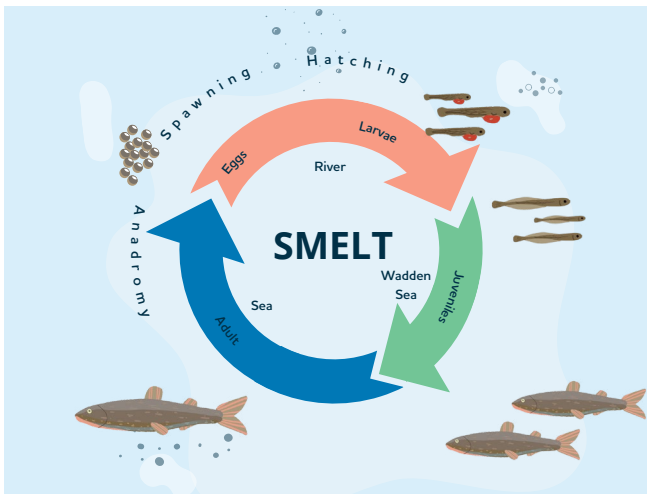
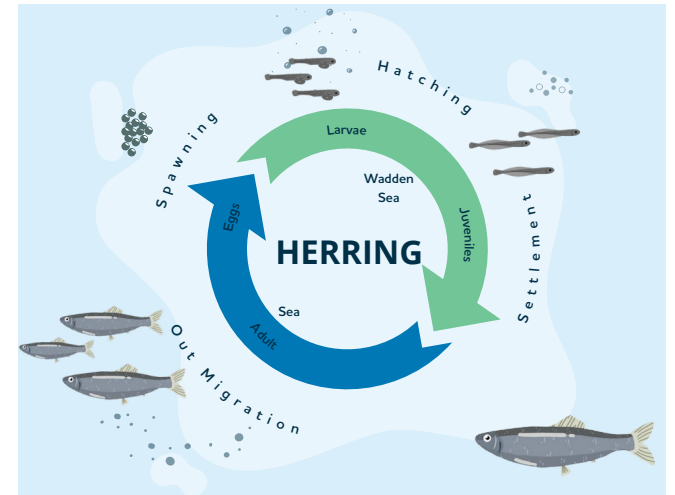
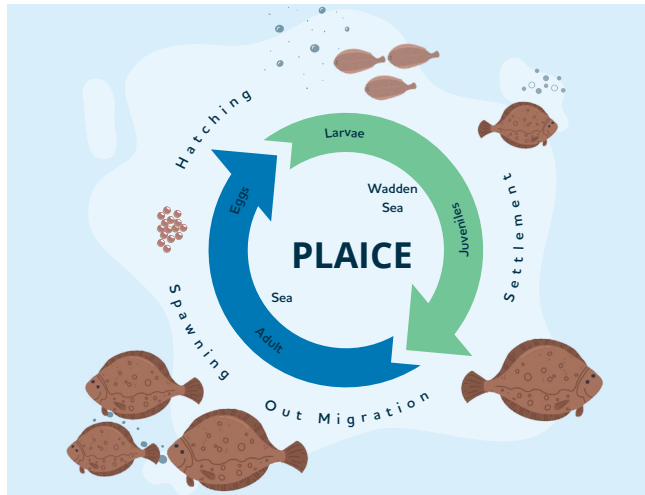
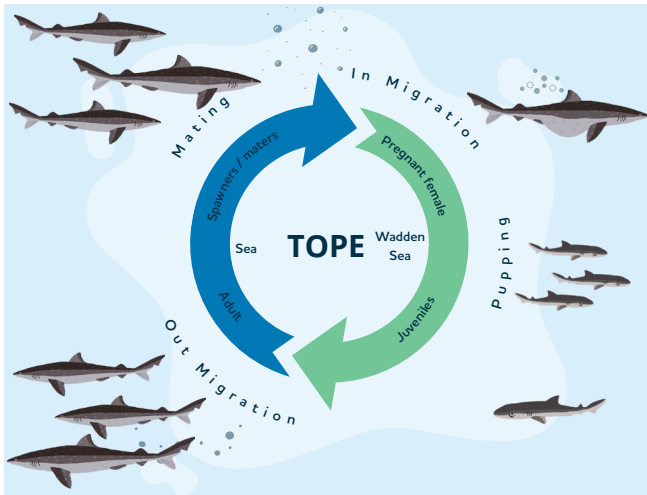
Site requires ongoing efforts to improve their environment. Further, science has progressed and continues to provide information on potential management measures. During the conference, authorities, stakeholders, and managers shared the urgency to jointly act based on the existing knowledge.

“Our symposium highlighted how important it is to consider the ecosystem and its inhabitants as a whole and how significant it is to preserve and restore natural dynamics in the Wadden Sea for us all”, said Paddy Walker, Chair of the Expert Group Swimway of the Trilateral Wadden Sea Cooperation. “The health of our trilateral migratory fish strongly relies on the connectivity between open sea, the Wadden Sea, and inland waters”, added Katja Philippart, Director of the Waddenacademie. “Knowledge on the relationships between these pathways and the needs of fish during different phases of their life cycle is crucial for effectively addressing present and future hurdles along their way.”



Participants of the Trilateral Swimway Conference 2024 in Groningen © CWSS/Bostelmann

Life cycles of flagship migratory fish species in the Wadden Sea



Restoration project at Het Lieversche Diep © CWSS/Bostelmann



The symposium was held back-to-back with the Free Flow 2024 conference, focusing on the significance of free-flowing rivers, also held in Groningen earlier that week. Both events collaborated to offer a joint excursion day, underscoring the interconnectedness of water ecosystems and the need for holistic conservation approaches. The five excursions offered insights into pioneering fish migration projects within the Dutch Wadden Sea region, including the sea trout reintroduction project “Fish for connection” at Lauwersmeer, research at the Westerwoldse Aa within the Waddenfund project “Ruim Baan voor Vissen 2”, and the fish migration river at Afsluitdijk (see boxes for more details on two of the excursions).

The two conference days were packed with informative presentations and discussion. The key conclusion was that, while crucial knowledge gaps remain, there is enough understanding to begin protecting fish in the Wadden Sea. Representatives of responsible authorities expressed strong interest in receiving advice on fish protection measures. The life cycle approach, central to both the conference and the [Swimway Vision](#), was seen as effective in addressing fish conservation from multiple angles including migration, demography, ecophysiology, and the identification of anthropogenic bottlenecks. Future

challenges include the reconstruction of complete fish life cycles and their bottlenecks, balancing climate change mitigation with the protection and recovery of fish life cycles and giving fish protection more legal prominence.

The translation of scientific knowledge into management actions, where conferences such as this one play a major role, can lead to measurable improvement for fish. The process is a cornerstone of the Trilateral Wadden Sea Cooperation’s Swimway Vision built on research and monitoring, policy, measures, stakeholder involvement, and communication and education. Its underlying action programme is currently being reviewed with the aim to implement a new set of actions from 2026 onwards.

The 2024 Swimway Conference was organised by the Trilateral Expert Group Swimway, the Common Wadden Sea Secretariat (CWSS), Waddenacademie, Waddenvereniging, the University of Groningen, Wageningen Marine Research, van Hall Larenstein University, Danish National Park Wadden Sea, and Danish Ministry of Environment in the framework of the Trilateral Wadden Sea Cooperation and set within the Waddenacademie Symposium series. The next Swimway conference is expected to be in Denmark in three years’ time. 

SALTMARSHES AS FISH HABITAT ON SCHIERMONNIKOOG



Living on the edge – Importance of saltmarshes for fish in the Wadden Sea

An excursion to Schiermonnikoog, the smallest inhabited Dutch Wadden Sea island, highlighted the importance of saltmarshes for fish. Although known for their refuge and foraging value to migratory birds, recent research shows these marshes are also crucial for fish. Small fish, such as three-spined stickleback, herring, sprat, smelt, and goby, hide in the small coves and hunt small animals such as bristle worms, amphipods, and shrimps. During high tide, some species swim up onto the salt marsh to prey on amphipods. Some fish also eat insects that fall from overhanging salt marsh plants into the gully.

Organised by Rijksuniversiteit Groningen (RUG) and Waddenvereniging, the tour visited the University's research station on the island and learned about findings of the project Waddentools Swimway Waddenzee, a Dutch component of Swimway Wadden Sea.

Participants observed fish in the natural salt marsh creeks, using a fyke net, sharing and exploring the role salt marshes play in the Dutch Wadden Sea and which management measures help to make the salt marshes a better habitat for (young) fish. One of these management recommendations was to protect and promote saltmarsh creeks, that are large, long wide and meandering.

Another practice was to recreate salt-freshwater transition zones and to increase water retention times in the salt marshes.

Monitoring fish in tidal creeks of salt marshes © CWSS/Busch





BETWEEN SEA AND SOURCE: PEIZERDIEP



Another excursion followed the migration route of a sea trout from the Drenthe tributaries to lake Lauwersmeer and the Wadden Sea. Organised by Sportvisserij Nederland, Staatsbosbeheer, Waterschap Noorderzijlvest, and Waddenvereniging, the tour introduced the “Fish for connection” (*Vissen voor Verbinding*) project. The project aims to restore trout habitat and enrich the Lauwersmeer area ecologically and economically, as anglers are attracted to the area. Fish migration is optimised along the route from tributary to the sea, which benefits other fish species.

A stream-side presentation was given at Het Lieversche Diep, a restored habitat in the tributary streams of lake Lauwersmeer, on how the area was reconstructed, fish passages created, and gravel beds laid to allow the stream to meander again. Educational panels at recreational intersections raise awareness about migrating fish. The group learned about the challenges of managing the area between the streams and the sea, where different functions conflict: Some land is redesigned as a water buffer, to store excess water during droughts while some waterways are used as shipping routes and others protect Groningen by pumping water towards lake Lauwersmeer.

In Lauwersmeer National Park, the focus moved to the importance of estuarine ecosystems for fish migration. The organisers showcased improvements in the connection between the inland freshwater and the sea as well as stakeholder involvement. Given the importance of agriculture in the area, a local farmer shared his views and work with the project partners.

The group further met with researchers of Van Hall Larenstein University of Applied Sciences, who have been tagging and tracking multiple fish species with acoustic transmitters to monitor fish migration in the area. Here, stakeholder involvement is also key as fishers report sea and brown trout catches, so that researchers can collect, tag, and release them. Anglers are also encouraged to report sightings of trout as citizen scientists.

The excursion painted a wholesome picture of the many facets of improving fish migration routes from land to sea.

GERMAN-DUTCH RESEARCH PROGRAMME

UNDERSTANDING THE WADDEN SEA'S COMPLEXITY

The German federal and Dutch governments committed approximately €15 million to five pioneering research projects aimed at studying the intricate relationship between sediment, ecology, wise use by humans, flood safety, and the protection and management of the Wadden Sea. Five research projects have been selected. This significant investment highlights to all stakeholders the importance of deepening the understanding of the dynamics of the region and the role this has in preserving the Wadden Sea, recognised globally since 2009 as a natural World Heritage Site.

The Wadden Sea, at the interface of three industrial nations, is a dynamic system where living organisms, tides, and sediments interact in a delicate balance. The area is under increasing

pressure from the triple planetary crisis: biodiversity loss, climate change, and pollution. The bilateral German-Dutch research initiative launched in 2023 seeks to address these challenges by providing a deeper understanding of the complex factors affecting the Wadden Sea and developing strategies for its preservation.

The five funded projects (see overview on page 33), set to run over the next four years, will explore various aspects of the Wadden Sea ecosystem, combining expertise in sedimentary dynamics, benthic ecology, terrestrial biology, landscape, and legal design. The projects aim to deliver a systemic view of the Wadden Sea to ensure comprehensive and sustainable management approaches.

The programme is a collaborative effort funded by multiple entities,

including the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMUV), the Federal Ministry of Education and Research (BMBF), the Lower Saxony Ministry for the Environment, Energy, Building and Climate Protection (LBV), the Dutch Ministry of Infrastructure and Water Management (IenW), the Ministry of Economic Affairs and Climate Policy (EZK), the Waddenfonds, and the Dutch Research Agenda. An independent committee of 23 experts, chaired by former Wadden Sea Board Chair and emeritus professor Dr. Karin Lochte, oversaw the assessment and selection of the projects.

Sascha Klöpffer, CWSS Executive Secretary and involved in the Trilateral Programming Committee: "These projects promise to deliver

critical insights and strategies that will safeguard the Wadden Sea's Outstanding Universal Value and will help ensure it remains a thriving ecosystem for generations to come. They will not only deepen our scientific understanding but also translate research into practical measures for the Wadden Sea's conservation".

[Programme page](#) 



Aerial view of artificially built salt marshes and tidal flats © Janis Meyer/Waddenagenda

MEET THE PROJECTS



PaRCA: Pathways for Realising Climate Adaptation in the Wadden Sea focuses on adaptive strategies to mitigate the impacts of climate change on the Wadden Sea ecosystem. This project involves a consortium of experts from various fields, including natural and social sciences, engineering, and management. The objectives include analysing different measures to support tidal flat growth, such as sand nourishments and managed retreat, to ensure the sustainability of this vital ecosystem. Led by Prof. Dr. Christian Winter (Kiel University) and Prof. Dr. Zhengbing Wang (Delft University of Technology), PaRCA brings together experts from institutions across Germany, the Netherlands, and Denmark.



SedWay: Safeguarding the Natural Sedimentary Processes in the Wadden Sea for Biodiversity and People aims to preserve the natural dynamics that sustain biodiversity and support human activities in the region. The interactions between water, sediment, and landscape-building species such as mussels, seagrasses, and salt marsh plants are crucial for maintaining the Wadden Sea's ecosystem services. However, human activities increasingly disrupt these natural dynamics, necessitating better integration of sediment dynamics and landscape-building species, as well as a shared trilateral perception of a natural Wadden Sea. Using a socio-ecological approach, SedWay will deliver a co-designed Decision Support System (SedWay DSS) to quickly assess threats and plan restoration efforts. Led by Prof. Tjisse van der Heide (NIOZ/GELIFES) and Prof. Bernd Siebenhüner (Carl von Ossietzky University Oldenburg), the consortium consists of scientists from the Netherlands and Germany, including the Lower Saxony National Park Authority and the HZ University of Applied Sciences and Deltares.



TRICMA2: Triple Crisis Meets Trilateral Cooperation focuses on the impacts of biodiversity loss, climate change, and pollution on salt marshes, aiming to develop sustainable management strategies. The salt marshes of the Wadden Sea are vital ecosystems, serving as key feeding grounds for millions of birds and playing a crucial role in coastal protection. Addressing the threats posed by biodiversity loss, pollution, and climate change is essential to preserving these unique habitats for future generations. The project will involve laboratory studies and fieldwork to address existing risks and collaborate with stakeholders from various sectors. Led by Prof. Chris Smit (GELIFES) and Prof. Kai Jensen (University of Hamburg), this project involves a consortium of scientists from the Netherlands, Germany, and Denmark.



SALTGARDEN: Sustainable Adaptive Landscapes through Transdisciplinary Gardening to Advance the Resilience and Dynamics of our Ecological Natural Heritage promotes the resilience and dynamic adaptation of the Wadden Sea's landscapes. In response to the triple ecological crisis, SALTGARDEN focuses on enhancing the resilience of the Wadden Sea's vulnerable coastal systems through biodiverse and dynamic salt marshes. Collaborating with trilateral stakeholders, the project aims to inform adaptive policy pathways to future-proof the Wadden Sea's salt marshes and communities. SALTGARDEN integrates mesocosm experiments, field observations, model simulations, and socio-economic assessments to quantify and predict the development of biodiverse-dynamic versus static-cultivated salt marshes. The project will co-create Nature-based Gardening strategies to develop adaptive landscapes and sustainable wetland management, extending beyond coastal protection. Led by Dr. Maike Paul (Leibniz University Hannover) and Dr. Ir. Erik Horstman (University of Twente), this project involves a consortium of scientists from the Netherlands, Germany, and Denmark.



WADWAD: WAD was – WAD can we do? Action Plan for Ecosystem-Based Land-Sea Transition Zones started on 1 June this year and focuses on action plans for the transitional zones between land and sea, aiming to enhance ecosystem-based management practices. The Wadden Sea currently faces sustainability challenges due to sea-level rise, relying heavily on sea dikes. WADWAD will develop nature-based future scenarios and assess their social acceptability among administrations, local citizens, and stakeholders. By forming a think tank of interdisciplinary experts, the project seeks to generate knowledge for local to regional policy and management advice, promoting sustainable management of the Wadden Sea. WADWAD aims to create a trilateral action plan for land-sea transition zones by synthesising existing research on sediment dynamics, sea-level rise, and coastal adaptation measures. Led by Dr. Diana Giebels (University of Oldenburg/Wageningen University) and Dr. Jaap Nienhuis (Utrecht University), this project involves a consortium of scientists from Germany and the Netherlands.

Autumn colours of queller in a pioneer salt marsh © Anette Bjoerlin/SGI



MANABAS COAST

SALT MARSH MANAGEMENT IN A CHANGING CLIMATE

Climate change is becoming a significant threat to World Heritage sites and the Wadden Sea is no exception. The Trilateral Wadden Sea Cooperation (TWSC) is working to address these impacts through its [Climate Change Adaptation Strategy \(CCAS\)](#) which aims to enhance the resilience of the Wadden Sea ecosystem. An important element for climate change adaptation is the management of salt marshes, which provide essential ecosystem services like carbon storage and coastal flood defence.

Salt marsh management varies across Denmark, Germany, and the Netherlands, with a mix of passive and active strategies employed for multiple purposes: enhance biodiversity, support coastal flood defence (Nature based Solution, NbS), agriculture, etc. However, sea-level rise driven by climate change poses a growing risk to these habitats.


From 7-11 October 2024, project partners of the INTERREG North Sea

Programme project [MAinstreaming NAture BAseD Solutions through COASTal systems](#) MANABAS COAST; 2022-2027; met in Groningen, Netherlands. The meeting, organised by Rijkswaterstaat, NLWKN, and the Common Wadden Sea Secretariat (CWSS), included multiple excursions: to the Afsluitdijk, the Dutch and German sides of the Ems estuary, and to sites along the Wadden Sea coast near Groningen. The excursions provided valuable input to working group discussions on salt marshes, sandy coasts, monitoring, and the legal framework of salt marsh management.

The MANABAS COAST project aims to develop an accessible and evidence-based framework for large-scale implementation of NbS in coastal areas, addressing climate impacts while enhancing biodiversity and human well-being. A side event was a workshop on 10 October, titled "Nature Conservation and Coastal Flood Defence: How Much Salt Marsh Management Do We Want and Need in a Changing Climate?", organised by

CWSS, the trilateral Expert Groups Climate Change Adaptation, Salt Marshes and Dunes, and partners of the MANABAS COAST project. Over 60 participants from Sweden, Denmark, Germany, the Netherlands, Belgium, and France discussed salt marsh management in the context of climate adaptation.

The workshop emphasised the importance of natural dynamics – the guiding principle of the TWSC – and of system-wide understanding for salt marsh management and highlighted the role of historical data in informing future strategies. Participants also discussed the restoration of salt marshes – a topic with growing

importance also in the light of the EU Nature Restoration Law. Overall, the workshop reinforced the need for a collaborative approach to ensure the Wadden Sea remains resilient in the face of climate change. 

Participants of the MANABAS COAST meeting © Ricardo Fijma



NEW INTERREG A PROJECTS

REDEFINING WADDEN SEA TOURISM

As tourism pressures grow on the Wadden Sea World Heritage Site, balancing economic benefits with ecosystem preservation becomes critical. Cross-border initiatives within the INTERREG A Programme have been key in supporting sustainable tourism in the Wadden Sea Region and applying the trilateral sustainable tourism strategy. The “VaBene” and “WaddenVision” projects are now opening a new chapter in redefining how sustainable tourism is approached and implemented in the Wadden Sea World Heritage Destination.

Traditionally, tourism has used nature to attract visitors. The Danish-German project “Visitor Activation to Benefit Nature and Environment” (VaBene) aims to reverse this approach by making tourism work for nature. VaBene seeks to create tourism infrastructure that is environmentally responsible, accessible, and economically viable. Launched in October 2023, this €1.7 million Interreg 6a project runs

until September 2026, developing sustainable tourism experiences that actively protect the Wadden Sea. Key partners include the Wadden Sea National Park in Denmark, the Schleswig-Holstein Wadden Sea National Park Authority, WWF Germany, and Nordsee Tourismus Service GmbH, alongside other regional stakeholders.


The initiative “WaddenVision – Sustainable Tourism in the Wadden Sea Region” seeks to transform the region into one of the leading sustainable destinations in Europe. This Dutch-German project, launched in June 2024, focuses on a balance between the economic, environmental, and social impacts of tourism. One of its key innovations is an assessment and dashboard system to track sustainability at different levels within the region. Best practices will be identified and shared, and local businesses aligned with sustainability goals will be promoted. With a budget of €3.7 million over four years, project partners are Merk

Fryslân, Economic Board Groningen, Nationaal Park de Aarde Feânren, NHL Stenden, Waterschap Hunze en Aa’s, Ostfriesland Tourismus GmbH, Internationale Dollard Route, Lower Saxon Wadden Sea National Park Authority, Ökowerk Emden, and Hochschule Emden Leer.

Projects like VaBene and WaddenVision are essential drivers in achieving the Wadden Sea’s sustainable tourism strategy. They empower local stakeholders by providing resources and training for sustainable practices, and their long-term impacts are expected to support both tourism and environmental conservation.

The Common Wadden Sea Secretariat, representing the Trilateral Wadden Sea Cooperation, is a network partner in both projects. As a transboundary platform, it enhances synergies between the projects, strengthening their cross-border impact and ensuring a cohesive approach to sustainable tourism development throughout the Wadden Sea region. This collaborative

framework not only benefits local tourism and conservation but also positions the Wadden Sea as a model for sustainable tourism that can be replicated globally.

VaBene and WaddenVision are reshaping the future of tourism in the Wadden Sea World Heritage Destination. Continued support and cooperation are essential to sustaining the positive effects of these projects, ensuring that tourism in the Wadden Sea remains both economically and environmentally viable for generations to come. 



Ren Strand Fano helps tourists combine a beach stroll with litter collecting © Red Star



Deutschland – Nederland

WaddenVision
WaddenVisie



Deutschland – Danmark

VaBene

KID PROJECT OVERVIEW

MONITORING ARTIFICIAL LIGHT

Initiated in 2022, the Interreg North Sea Small Scale project "KID – Keep It Dark" addressed the growing concern of light pollution in the Wadden Sea Region. In March 2024 the 18-month project was concluded.

Artificial light has been seeping into one of the darkest regions of Europe, the Wadden Sea area. As darkness has become a rarity, monitoring of light pollution has become increasingly crucial for the conservation and management of the Wadden Sea World Heritage Site.

KID aimed to develop a robust, long-term system for monitoring the excessive and misdirected artificial light in the environment. The project's area of interest spans parts of the Netherlands, Germany, and Denmark, and covers various colour bands of light, as the intensity and colour of light affect nature in different ways. Special attention was given to the blue, a very significant colour, which has thus far seemingly fallen through the cracks. The universities

of Groningen, Oldenburg, and Aarhus have established a dynamic collaboration between experts and students for development of the KID monitoring system.

The pilot sites consist of a bright and a dark location within each collaborating country. The core system set up consists of a Sky Quality Meter (SQM) detector, integrated into the KID-Groningen network, and a Digital Single-Lens Reflex (DSLR) camera-based system (KID-RP or KID-6D, depending on the DSLR camera). Different devices and procedures have been compared, including calibration methods. The next step is to decide which detectors are best suited for permanent installation in a larger roll-out. One certainty is that the local KID network outperforms (VIIRS) satellite measurements in accuracy. This analysis also contributes to the discussion on standardisation of sky brightness measurements. Moreover, the KID measurements have been connected to ecological studies and local communities and industries.

Even though the project period has ended, work continues: As more data is collected and experience with the system grows, the KID monitoring system is being prepared for (local) administrators to use. Some data from each pilot site has already been made publicly available, carefully organised.

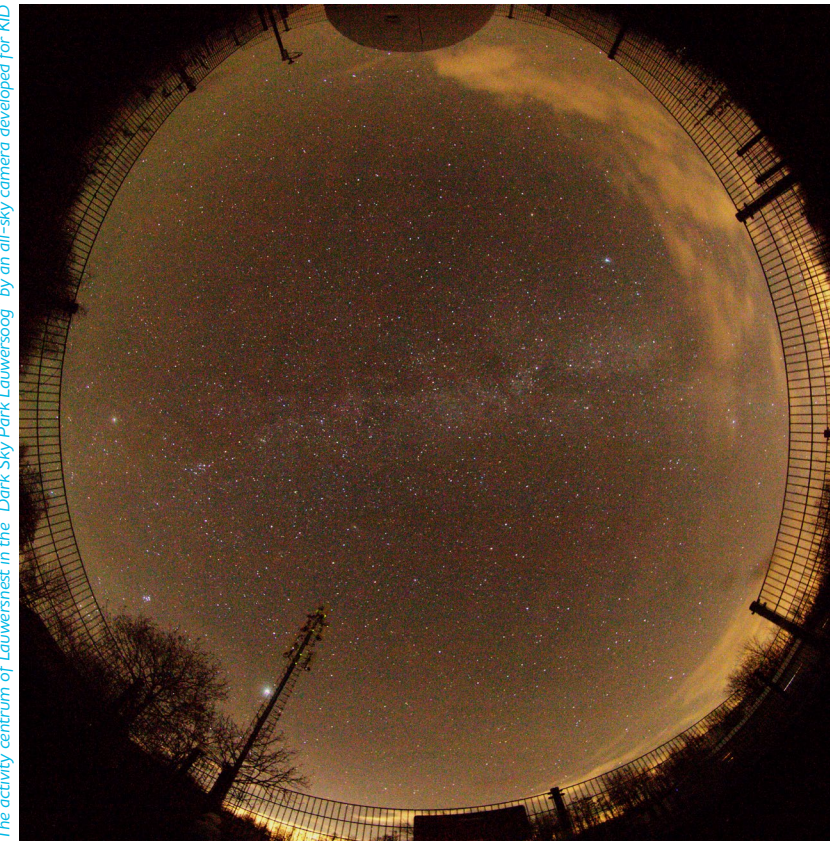
A new interface and polished system for the data website are in development to include more sites and to improve user experience, especially in interpreting the data and understanding uncertainties more easily. Throughout this process, close contact has been kept with authorities to see what works best for them in support of a sustainable future.

Finally, the results of KID will be used and expanded as part of the larger Interreg DARKER SKY project, focusing on measures that reduce light pollution. Further support will also come from a network of stakeholders from various backgrounds that was established

during the project period, in particular through the EURODARK 2024 conference, where the work was presented in great detail.

More information on the KID project and its results are available at www.interregnorthsea.eu/kid

The activity centre of Lauwersnest in the "Dark Sky Park Lauwersoog" by an all-sky camera developed for KID



Interreg
North Sea



KID

DARKER SKY PROJECT

ONE YEAR OF PROGRESS AND FUTURE DIRECTIONS

Launched in September 2023 in Brest, France, the DARKER SKY project has completed the first of three years. In a collaborative effort, the project's consortium of stakeholders across the North Sea region has focused on laying a strong foundation for its ongoing and future activities.

A key focus of the first project year has been on gathering an overview of existing policies related to light pollution across different regions. This analysis is crucial for understanding the current policy landscape and identifying gaps.

In parallel, the consortium developed a common monitoring protocol that will be implemented throughout the project's duration. This protocol is designed to standardise the collection of data on light pollution and its biological impacts across all

project sites. The development of this protocol ensure that the outcomes are measurable and comparable across different regions.

A significant aspect of DARKER SKY is the practical implementation of new lighting schemes at eight designated pilot sites. Among these are the ports of Norddeich (Germany) and Lauwersoog (Netherlands) and the village of Holwerd aan Zee (Netherlands), where the installation of new lights will commence in winter 2024/25. The planning process, which involves the local population and users of the port area, is already underway. This engagement is crucial to ensure that the lighting solutions are environmentally friendly, socially acceptable, and in accordance with relevant regulations. Particularly in ports area, lighting is critical to ensure

safe operations at night, as a minimum light level must be consistently maintained as prescribed by regulations. At the same time, efforts are needed to minimise the negative effects of light on the surrounding environment.

At each site, the new lighting schemes are accompanied by extensive monitoring efforts. These include measuring levels of light pollution and conducting biological assessments to understand how changes in lighting affect local wildlife, particularly nocturnal species.

During the second partner meeting, hosted by the University of Groningen in March 2024, the project partners learned more about the light pollution mitigation plans at the port of Lauwersoog. At the Lauwersmeer Dark Sky Park the participants gained

insight into its designation process as a Dark Sky Park.

Held on 5 to 7 November (after the editorial deadline), a third partner meeting in Norddeich, Germany, included a study visit to Spiekeroog, a Star Island and member of the International Dark Sky Community since 2021.

As the DARKER SKY Project moves into its second year, the consortium is focused on building on the progress made so far. The lessons learned from the pilot sites will be used to refine and improve the approaches being tested, with the goal of creating scalable solutions that can be implemented in other regions.

www.interregnorthsea.eu/darker-sky



DARKER SKY MID-TERM CONFERENCE

25.03.2025 in Holwerd aan Zee, Netherlands.

Presentation of the project's first result and exchange among stakeholders.



interreg North Sea Co-funded by the European Union

DARKER SKY

Sunset sky during an excursion to the port of Lauwersoog © NPorts/Bucziar



In the Angolan Mussulo Bay, WSFI supported INBAC in a litter cleaning event, among other activities © Tim Dodman



WADDEN SEA FLYWAY INITIATIVE

TEN YEARS OF CAPACITY-BUILDING SUPPORT ALONG THE EAST ATLANTIC FLYWAY



Tim Dodman © Tim Dodman

Over ten years ago, in 2013, the Wadden Sea Flyway Initiative (WSFI) launched its capacity-building and management programme focused mainly on the African part of the East Atlantic Flyway. Working with international, national, and local partners, WSFI has since co-organised several international events, especially training and awareness-raising workshops, and has supported a wide range of site-based projects in most countries of Africa's extensive Atlantic coastline. A report published this year reflects on a decade of capacity-building.

"WSFI's capacity-building and management programme has managed to support a wide range of small projects over ten years, embracing almost all countries along Africa's Atlantic coastline in one way or another. There has been real enthusiasm, innovation, and purpose, and it's amazing what can be achieved sometimes through small, targeted projects. Flyway conservation is a great way to bring people together, and the rewards for both birds and people invariably justify the effort.", says Tim Dodman, WSFI affiliate and author of the report.

The richly illustrated short report "Ten years of capacity-building support along the East Atlantic Flyway, 2013-2023" provides an overview of activities supported by WSFI, both at the flyway level and at the country and site level. At the flyway level, several regional training workshops have been organised between 2013 and 2023. WSFI partners have participated in World Migratory Bird Day activities, and support was given to emerging and new wetland centres along the flyway. A key publication of the initiative is the WSFI African East Atlantic Flyway Guide. This field guide to the waterbirds and seabirds of Africa's Atlantic coastline is widely used by researchers and site managers along the East Atlantic Flyway. With the East Atlantic Flyway Youth Forum, WSFI partners have established an annual online platform

for young wetland conservationists to grow their professional network and develop a skillset previously identified as beneficial, especially from a flyway perspective.

At the national level, several projects in 15 African countries have received support through WSFI capacity-building. For example, at Angola's Mussulo Lagoon, WSFI supported surveys, the collection and removal of plastic and other rubbish, and the construction of a bird hide at Ilheu dos Pássaros within this coastal lagoon. A major stakeholder consultation workshop in Guinea-Bissau supported the designation of the Bijagós Archipelago as a World Heritage Site. In Equatorial Guinea, a national training course was held with training field surveys across the coastal zone, including the islands.

Further projects and achievements of the WSFI can be found in the report, which is [available online](#). In the following section, partners along the East Atlantic Flyway share their reflections on working with the WSFI.

WSFI capacity-building projects are funded by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety of Germany, with additional financial support by the Danish Ministry of Environment and Gender Equality.





Ariana Cabral © Tim Doelman

ARIANA CABRAL

**Lantuna,
Cabo Verde**

“As a young graduate at the start of my career, I took part in the CEPA workshop in Senegal. The workshop was fundamental in opening up my learning horizons, and the networking that took place was of great value to me; making connections and sharing experiences led to valuable opportunities. The workshop was extremely enriching and gave me valuable tools to interact more effectively with people in the community. I learnt communication techniques that promote empathy and active listening, which made a big difference to my approaches. In addition, the group dynamics helped me to better understand the needs and concerns of others, allowing me to connect in a more genuine and constructive way. I feel better prepared to collaborate and build solid relationships in the community and hope to continue applying what I’ve learnt in my professional career.”



Camille Tchankpan © Tim Doelman

CAMILLE TCHANKPAN

**Oiseaux et Horizons,
Benin**

“WSFI has supported a valuable capacity-building and management programme in Benin focused on key coastal Ramsar sites, promoting studies on the threats to waterbirds, including hunting, and raising awareness among young people and local communities through educational World Migratory Bird Day activities. We have been able to monitor mixed colonies of herons, African Cormorant and African Openbill, strengthening our understanding of their distribution and the importance of sustainable conservation of their habitats, whilst also raising awareness among local populations.”



Evelyn Moloko © AEWA

EVELYN MOLOKO

**African-Eurasian Migratory Waterbird
Agreement (AEWA), Bonn, Germany**

“The collaboration between AEWA and WSFI over the past decade has been instrumental in advancing the conservation of migratory waterbirds along the East Atlantic Flyway, with emphasis on joint activities between the AEWA African Initiative and the WSFI Capacity Building and Management Programme. By combining efforts through joint strategic planning operations, project development initiatives and on-the-ground capacity enhancement activities such as the Flyway Training of Trainers workshops jointly organised for Lusophone African countries in Angola (2014) and for francophone Western and Central African countries in Benin (2019), we have not only strengthened waterbird conservation across the East Atlantic Flyway, but also maximised the impact of our shared resources for more effective attainment of our common goals. This partnership has significantly enhanced the visibility of both AEWA and WSFI along the East Atlantic Flyway and has helped provide targeted support for waterbird monitoring, national/flyway-level implementation of AEWA International Single Species Action Plans such as the one for the Lesser Flamingo, and the establishment of a valuable network of highly motivated persons advancing both political and technical aspects of waterbird and wetland conservation.”



Esther Nosazeogie © Private

ESTHER NOSAZEOGIE
*Nigerian Institute for Oceanography
 and Marine Research, Lagos, Nigeria*

“WSFI provided funds and support for creating an educational exhibition to save a key urban wetland in Lagos, Nigeria, which is located at the National Theatre, one of the country’s most important cultural icons. The wetland is currently undergoing restoration, and the exhibition has increased public awareness and engagement on wetland and waterbird issues in the city. We hope that this will be an example of urban wetland conservation and promote wise use of coastal resources in Nigeria’s largest city and other coastal cities.”



Imad Cherkaoui © Tim Dodman

IMAD CHERKAOUI
*University of Ibn Tofail,
 Morocco*

“Raising the capacity of stakeholders in southern Morocco is vital to mitigate major risks to waterbirds and enhance wetland co-management and governance. WSFI has supported a series of training workshops, covering site management, threats and institutional frameworks, and enhancing abilities to monitor waterbirds and wetland habitats. After workshops in 2018, local NGOs in Moroccan Saharan wetlands lobbied successfully for the designation of two wetlands in the region, Oued Assaquia Al Hamra à La'youne and Côte Aftissate-Boujdour, as Ramsar sites – a lasting achievement demonstrating the need for strong local NGO capacity.”



Madaleno Constantino © Private

MADALENO CONSTANTINO
*Associação dos Defensores e Amigos do
 Ambiente (ADAMA), Lobito, Angola*

“Partnership with WSFI has been key for our organisation, taking into account the skills, abilities, mentorship, lessons and resources received. The introduction of CEPA in our working scheme has created a more collaborative and friendly local community attitude towards migratory birds and their habitat in Lobito. WSFI has helped us to develop relationships with other organisations along the East Atlantic Flyway and has played a key role in our conservation flagship project – the CIOMA wetland centre (Centro de Informação Observação e Monitorização de Aves). Through CIOMA, Lobito has become a conservation national reference in Angola, playing an international role as an important bird migration stopover site. Through our shared conservation projects and their impact in the field, we are pleased to name WSFI as our Most Valuable Partner.”



Ousman Kamara © Tim Dodman

OUSMAN KAMARA
*Sierra Leone Nature Guides
 Association (SLNGA), Sierra Leone*

“Sierra Leone has benefited from capacity building for different target groups, supported by WSFI. Training for local nature guides has been very important for us, and can contribute to the creation of employment, helping us to get job opportunities and receive income in our different localities. We have also raised awareness about the importance of protecting migratory birds and their habitats in Sierra Leone, which can benefit birds and people.”



DECISION 46 COM 7B.51

WADDEN SEA

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

The World Heritage Committee,

1. **Having examined** Document WHC/24/46.COM/7B.Add.3,
2. **Recalling** Decision 45 COM 7B.23, adopted at its extended 45th session (Riyadh, 2023),
3. **Notes with concern** the potential cumulative impacts on the Outstanding Universal Value (OUV) of the property from numerous activities and infrastructure developments planned or established within and in the wider setting of the property, including extractive activities (oil, salt and gas), ports and shipping, and energy facilities, which could be exacerbated by climate change, especially through accelerating sea level rise;
4. **Appreciates** the efforts of States Parties to address these challenges by strengthening joint strategic management of the property and enhancing its protection and resilience to climate change;
5. **Requests** the States Parties to jointly adapt and update management measures for the property in the light of the latest scientific data on climate change and to submit

the updated thematic report on climate change in the Wadden Sea to the World Heritage Centre as soon as it becomes available;

6. **Recalls** its established position that extractive activities are incompatible with World Heritage status, and **considers** that the numerous ongoing and planned extractive activities in the vicinity of the property and its wider landscape, including oil, gas, and salt extraction and associated sea floor subsidence which, in combination with sea level rise, could have a negative impact on the OUV of the property;
7. **Also requests** the States Parties to:
 - a. Operationalise the measures included in Paragraph 112 of the Operational Guidelines, which highlights that an effective management approach extends beyond the property to include its wider setting, as its management is related to its role in supporting the OUV of the property;
 - b. Align the national legal frameworks related to planning procedures and decision-making with Paragraph 118bis of the Operational Guidelines and ensure that

impact assessment processes are systematically carried out for proposed projects that may impact on the OUV of the property, in line with the Guidance and Toolkit for Impact Assessments in a World Heritage Context, to fully consider the potential impacts on the property's OUV,

- c. Not to authorise projects that may contribute to seabed subsidence in the property;
8. **Further requests** the States Parties to ensure that any extractive projects in the wider setting of the property, including the pending GEMS project application for a gas field exploitation, undergoes an appropriate impact assessment procedure and that the project is not approved if it may cause negative impacts on the OUV of the property;
9. **Welcomes** the decision by the State Party of the Netherlands not to approve the proposed gas extraction project at Ternaard based on the assessment by the supervisory State of conservation of properties WHC/24/46.COM/7B.Add.3, p. 29 inscribed on the World Heritage List authority

that the risk of subsidence in the Wadden Sea was too high in light of new sea-level rise projections, and **urges** the State Party of the Netherlands to take an unequivocal decision not to approve the project, also in accordance with the legislation adopted in March 2024, not to issue any new gas extraction permits within and under the property;

10. **Also welcomes** the reported draft rejection of the pending application by Wintershall Dea for oil extraction below the property from an exclave encircled by the property, and **requests furthermore** the State Party of Germany not to grant final approval to this application, in accordance with the draft rejection and the State Party's commitment under the Wilhelmshaven Declaration to work towards the closure of exclaves within the property, and therefore not to grant any new extractive activities within these exclaves;
11. **Further welcomes** the ongoing evaluation by the State Party of the Netherlands of the 'hand-on-tap' monitoring method in order to consider updated sea-level

rise scenarios and **reiterates its request** that, in accordance with the precautionary principle, no further extractive projects be approved, and that consideration is given to limiting or halting existing salt extraction activities, as required, to effectively maintain and protect the OUV;


- 12. Acknowledges** the importance and necessity to accelerate renewable energy production, nevertheless, **notes with serious concern** the increasing number of onshore and offshore energy facilities (e.g., wind) within the wider setting of the property, and **requests moreover** the States Parties to:
- a.** Adopt a joint strategic and systematic approach to the planning and implementation of projects to connect offshore infrastructures with the mainland, with the aim of avoiding negative impacts on the OUV of the property,
 - b.** Ensure that the planning and implementation of onshore energy facilities (e.g., wind) avoid negative impacts on migratory bird pathways and habitats;

13. Requests furthermore the State Party of the Netherlands to ensure the timely submission of the Strategic Environmental Assessment (SEA) for the PAWOZ-Eemshaven programme, as soon as it is available, to the World Heritage Centre for review by IUCN;

14. Further appreciates the updated information on the requested joint SEA to assess the cumulative impacts of extraction and infrastructure developments within and around the property, and **requests moreover** the States Parties to:

- a.** Ensure that the focus of the SEA is on the potential impacts on the attributes which convey the OUV of the property, as well as other heritage/conservation values, in accordance with the principles of the Guidance and Toolkit for Impact Assessments in a World Heritage Context,
- b.** Submit the scoping report of the SEA to the World Heritage Centre for review;

15. Finally requests the State Party to submit to the World Heritage Centre, by 1 February 2025, an

updated report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 47th session. 

DISCLAIMER



*During their 46th session, 21-31 July 2024, the World Heritage Committee adopted the **Decision 46 COM 7B.51** prepared by the World Heritage Centre and the International Union for Conservation of Nature (IUCN) in response to the state of conservation report submitted by the Trilateral Wadden Sea Cooperation on 14 February 2024. On pages 44-45, the original text of the Committee's Decision is displayed.*

WADDEN SEA FACES

HANS-ULRICH RÖSNER

A biologist by education, Hans-Ulrich Rösner found his professional and personal anchor in the Wadden Sea early in his career. Spending his alternative military service for the Schutzstation Wattenmeer on Pellworm in Schleswig-Holstein in 1984-85, Hans-Ulrich's affinity for the Wadden Sea manifested. Looking for a position that would keep him close, he started in WWF's Wadden Sea Office in Husum in 1986 and stayed. Today, he is the Head of that office and fully integrated in the Trilateral Wadden Sea Cooperation (TWSC) as Advisor to the Wadden Sea Board, representing the Wadden Sea Team of green NGOs – and as a living archive of transnational Wadden Sea history.

Why are you engaged in the Trilateral Wadden Sea Cooperation?

My sincere wish is to preserve the Wadden Sea as ONE transboundary ecological entity. WWF adopted this perspective in 1977, when we started including partners from all three countries in our Wadden Sea-

related projects. The Trilateral Wadden Sea Cooperation is probably the longest existing intergovernmental cooperation focussing on one protected area in the world. Sure, the Cooperation is not perfect, and we must continue advocating for progress. This trilateral level opens channels of exchange and interaction across the countries as well as at local, regional, national levels. The Cooperation enabled the World Heritage Site designation – key for the Wadden Sea's future and benefitting local stakeholders beyond the TWSC.

What does the Wadden Sea mean to you?

The Wadden Sea is a wonderful nature area, with all the migratory birds and the secrets they carry along their flyway. It is pristine nature, where dynamic processes are allowed to proceed, to a large extent. It is wide openness. The Wadden Sea is also childhood memories of me collecting seashells and beach walks during summer holidays – an experience that sparked my love for this place.

“The Wadden Sea is a wonderful nature area, with all the migratory birds and the secrets they carry along their flyway”



Hans-Ulrich Rösner has devoted his professional career to safeguarding the Wadden Sea © Robert Rösner



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

Many images come to mind. To pick just four, it's counting birds on an outer sandbank, taking photos at a high tide roost, cycling on car-free islands, and hiking through many Wadden Sea landscapes.

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

Maybe Westerhever – I am often there, and it is a great spot on the mainland, hosting many Wadden Sea habitats. But it is a difficult question. There are so many great places in the Wadden Sea and some I haven't seen yet. This shows just how big the Wadden Sea is.

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

I believe the overall quality of nature in the Wadden Sea will have slightly improved in 2050 – a success given the challenges! Losses in some areas may be balanced by improvements in others. I expect the strong public support for the protection of the Wadden Sea will continue, resulting in increased sustainability and respect for nature in human activities. I expect we will 'let nature be wild' in most of the Wadden Sea, while people continue to enjoy and experience it. However, I also see heightened pressures by increased tourism and energy projects on the ecosystem as well as on the credibility of the World Heritage and National Park designations.

In terms of climate, major impacts of the accelerated sea-level rise will become visible in the decades

Rösner in 1988 monitoring birds on Dieksanderoog © B. Ganter



after 2050. The climate crisis could even destroy the ecosystem in the long run. Yet, I expect global climate protection measures to have strongly increased in 2050, giving me hope that the Wadden Sea with all its values may survive.


Protecting the Wadden Sea started almost 120 years ago, evolving from a few early pioneers to today's Wadden Sea family, with many

"It is pristine nature, where dynamic processes are allowed to proceed"



milestones along the way. The scattered protected areas for seabirds from the beginnings have grown to cover almost the entire Wadden Sea, altogether leading up to the designation as World Heritage Site. There is much to build on, but we also pass unsolved problems on to the next generation. Human activities in and around the Wadden Sea stress the area and must be better managed. While global actions are imperative

to mitigate climate change, I expect future large-scale climate adaptation measures in the Wadden Sea and hope for as much of the nature to be left as undisturbed as possible. A challenge, clearly, but not unreachable.

I want to share three pieces of advice: cherish cooperation and partnerships, stay persistent and true for credible protection, and keep talking to those who don't share your opinions. 

2025

OUTLOOK

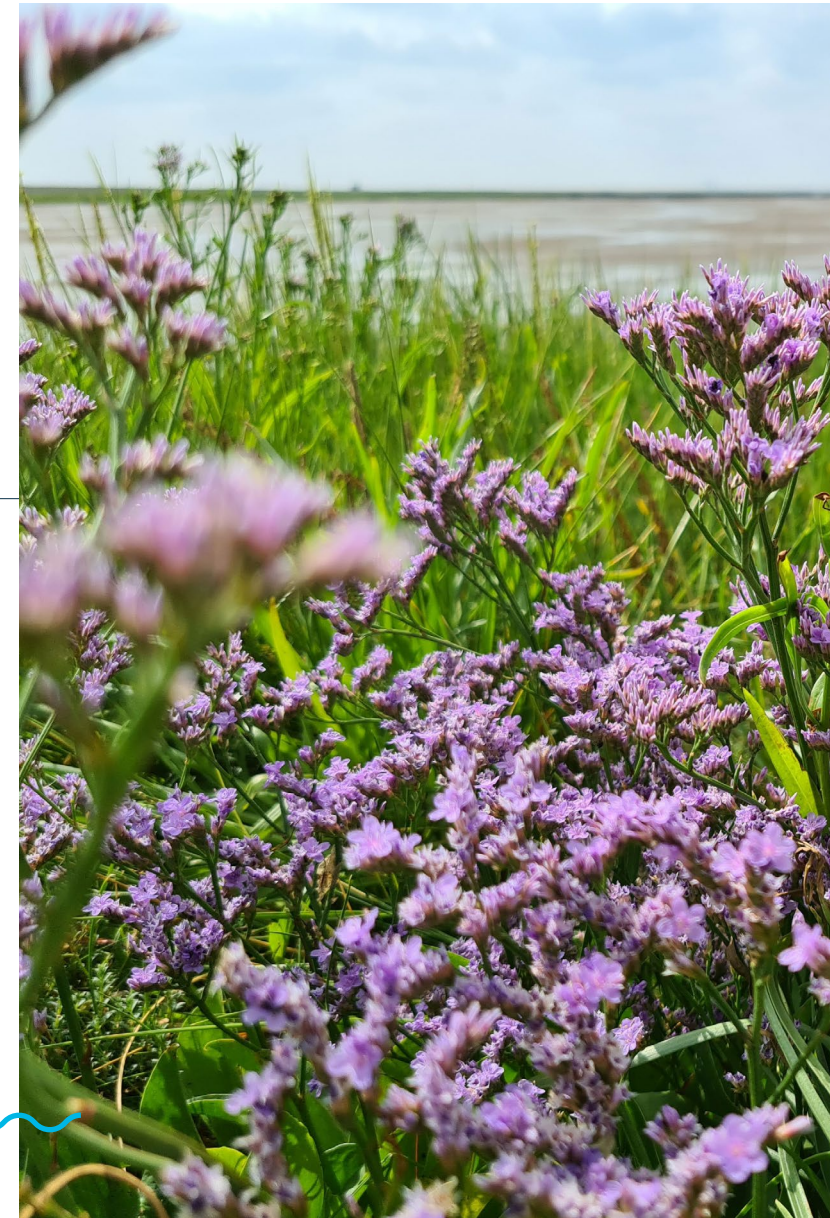
10-12 February

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 (TWSC) 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.

The TWSC’s annual surveys show a change in the development of the Wadden Sea’s harbour seal population after years of continuous growth. To assess the potential impacts of environmental and human-induced factors on this trend, experts will convene in Wilhelmshaven from 10 to 12 February 2025 for the “Scientific workshop: Population dynamics of harbour seals in the Wadden Sea.” The event is being organised by CWSS in collaboration with the Van Hall Larenstein University of Applied Sciences.

Spring & Autumn

In 2025, 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.





Blooming sea lavender © Ditte Hvild



August

The Wadden Sea World Heritage Summer School is an opportunity for students to learn about trilateral conservation, policy, and management aspects of the Wadden Sea. The Summer School 2025 is scheduled to take place in the Danish Wadden Sea Region, on the North Frisian Island of Sylt and in Wilhelmshaven, from 18 to 29 August 2025. ~~~~~

August

The Wadden Sea Day in 2024 sparked intriguing discussions on the challenges of safeguarding the Wadden Sea while navigating the green energy development in the North Sea. 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 2025, the event will be held on the last Thursday in August, in Wilhelmshaven. ~~~~~

Autumn

Planned for Autumn 2025 in the Netherlands, the International Scientific Wadden Sea Symposium (ISWSS) will serve as a key platform for scientists working in and around the Wadden Sea to share research and engage in trilateral cooperation. It provides an opportunity to present findings on the current state of the Wadden Sea and explore future challenges. The symposium's outcomes will inform policy discussions at the 2026 Trilateral Governmental Conference and help shape the future direction of the TWSC, including the Ministerial Declaration. ~~~~~

WADDEN SEA

BOARD MEMBERS & ADVISORS

MEMBERS OF THE WADDEN SEA BOARD



ANNE-MARIE VÆGTER RASMUSSEN

CHAIR OF THE BOARD, Chief Advisor, Agency for Green Transition and Aquatic Environment, Ministry of Green Transition, Denmark



NANOU BEEKMAN

National Representative to the Board, Director Fisheries and Large Waters, Ministry of Agriculture, Fisheries, Food Security and Nature, Netherlands



MARTIN PETERSEN

National Representative to the Board, Head of Department, Agency for Green Transition and Aquatic Environment, Ministry of Green Transition, Denmark



ILKA WAGNER

National Representative to the Board, Head of Division Marine Biodiversity, Marine Protected Areas, Marine Climate Action, Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection, Germany



KLAUS BERTRAM FRIES

Representative of the Danish Wadden Sea municipalities, Varde Municipality, Denmark



KRISTIAN HANSTED

Head of Division for Climate Adaptation, Environmental Protection Agency and Coastal Authority, Ministry of Environment and Gender Equality, Denmark



FLEMMING JUST

Chair National Park Wadden Sea, Denmark



VERA KNOKE

Head of Division Marine Protection and National Park, Schleswig-Holstein Ministry for Energy Transition, Climate Protection, Environment and Nature, Germany



JANNE LIEVEN

Director, National Park Authority, Hamburg Agency for Environment, Climate, Energy and Agriculture, Germany



JOOST DE RUIG

General Director Rijkswaterstaat North-Netherlands, Netherlands



LEO PIETER STOEL

Mayor of Ameland, Netherlands



ALEXANDRA STÜCK

Head of Division Natura 2000 and Protected Areas, Lower Saxon Ministry for the Environment, Energy and Climate Protection, Germany



SUSAN TOP

Delegate, Province of Groningen, Netherlands

BOARD ADVISORS



**MARCO ROHDE
BRODDE**

*Danish Ornithological Society,
Denmark*



**HANS-ULRICH
RÖSNER**

*Wadden Sea Team,
Director at Wadden Sea Office,
WWF, Germany*



**HENK
DE VRIES**

*Wadden Sea Team,
Director It Fryske Gea,
Netherlands*

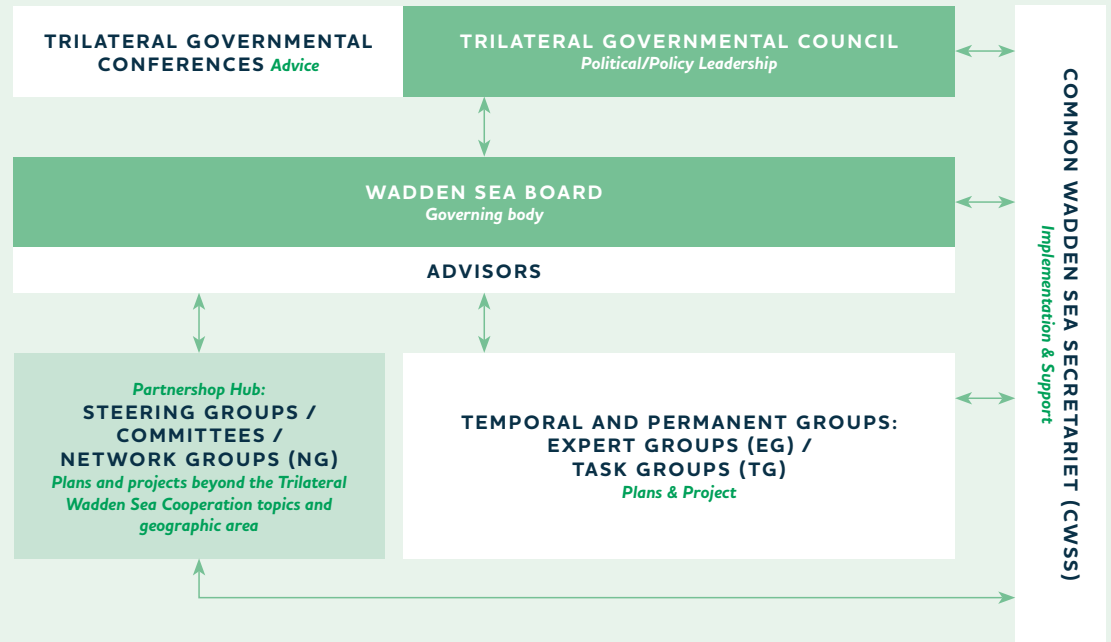
EXECUTIVE SECRETARY



**SASCHA
KLÖPPER**

*Executive Secretary,
Common Wadden Sea
Secretariat*

ORGANISATIONAL STRUCTURE



- REPORTING
- DECISION MAKING
- OPERATIONAL / ADVISORY
- ASSOCIATED BODY

