



Sand mason tubes. Photo by CWSS/ Bostelmann.

Trilateral Strategy on Renewable Energy Infrastructure

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Introduction

The Wadden Sea is a unique marine ecosystem, recognised globally as a UNESCO World Heritage Site for its Outstanding Universal Value (OUV) and jointly protected by Denmark, Germany, and the Netherlands under the Trilateral Cooperation for the Protection of the Wadden Sea (in short: Trilateral Wadden Sea Cooperation; TWSC). As we face the interconnected crises of climate change, biodiversity loss, and pollution, this unique area demands our collective responsibility.

At the same time, the convergence of environmental, geopolitical, and economic pressures reinforces the urgent need to accelerate the energy transition, reduce dependency on fossil fuels, increase self-reliance in energy supply, and reduce greenhouse gas emissions by 2050 in the European Union. This transition must be pursued without compromising the OUV of the Wadden Sea.

This Trilateral Strategy represents our shared commitment to enabling the offshore energy transformation, while safeguarding the OUV, and is supported by the wider activities of the TWSC and related European, international, and national frameworks.

Common Mission

To safeguard the ecological integrity and natural dynamics of the Wadden Sea World Heritage Site by supporting the environmentally responsible development of renewable energy infrastructure that contributes to the necessary phase-out of fossil fuels, while avoiding significant negative impacts on the Wadden Sea, including cumulative effects.

Objective

To implement this strategy as a coordinated systematic approach that enables a nature-compatible energy transition in the Wadden Sea region, while safeguarding its OUV.

Implementation Measures at Trilateral Level

1. ENCOURAGE COHERENT POLICIES

- Align with the European Ocean Pact and Integrated Coastal Zone Management principles, using these as guiding frameworks for sea-basin-wide cooperation on onshore and offshore renewables, marine conservation, and ecosystem restoration.
- Promote a level playing field based on the existing legal provisions and by exchanging experiences between national authorities to harmonise environmental standards, permitting practices, and mitigation requirements.

- Contribute to the implementation of legal and political frameworks relevant to the energy transition and nature protection such as the EU Birds and Habitats Directives, Marine Strategy Framework Directive, Renewable Energy Directive, and UNESCO World Heritage Convention.

2. STRENGTHEN INTEGRATED SPATIAL PLANNING

- Use marine and coastal spatial planning instruments to enhance cross-border coherence, ecosystem-based planning and to identify suitable areas for onshore and offshore renewable energy infrastructure that minimise impacts on the OUV and associated environmental values.
- Align national planning tools with the spatial goals of the [2010 Wadden Sea Plan](#) (e.g., minimise cables and corridors connecting to the mainland as well as keeping their effect on the environment to a minimum).
- Support spatial planning coordination mechanisms between energy, environment, and planning authorities to promote acceleration of project implementation by avoiding spatial conflicts.

3. APPLY FULL IMPACT ASSESSMENTS

- Continue to conduct coordinated impact assessments (Espoo Convention, Environmental Impact Assessments, Strategic Environmental Assessments) for projects with potential cross-border or cumulative impacts.
- Integrate Heritage Impact Assessments into environmental assessments as part of national planning and permitting procedures where the World Heritage site could be affected.
- Refer to [UNESCO guidance documents and online toolkits on impact assessment](#) and [renewable energy in a World Heritage context](#) in sensitive natural areas for valuable guidance, advice, and input.
- Promote the integration of the assessment of cumulative effects on key ecological processes, species, and landscape integrity of the Wadden Sea.
- Consider potential impacts from future renewable infrastructure plans and projects (e.g., within the Joint Strategic Environmental Assessment).

4. ADVANCE TECHNICAL INNOVATION, MONITORING, AND ADAPTIVE MANAGEMENT

- As part of the Trilateral Monitoring and Assessment Programme, support monitoring and data exchange across borders, agreeing on indicators and protocols to track environmental effects of renewable energy infrastructure and to ensure that mitigation and compensation measures are effective.
- Support Transmission System Operators (TSOs) and developers in continuously improving laying, operation, and maintenance techniques through nature-friendly innovation (e.g., quieter installation, low-disturbance routing, biodiversity-enhancing structures).

- Exchange information to build on lessons learned from previous infrastructure projects to inform adaptive, science-based improvements.

5. PROMOTE MITIGATION, COMPENSATION AND COHERENCE MEASURES

- Apply the mitigation hierarchy consistently: avoid > minimise > restore > compensate¹.
- Promote “trilateral thinking” in designing transboundary compensation and coherence measures to address residual impacts that cannot be avoided around the Wadden Sea World Heritage site, going beyond national borders to prioritise the ecological needs of the Wadden Sea as one system.
- Consider transboundary restoration and connectivity projects (e.g., for migratory birds, saltmarshes, subtidal habitats) that support the integrity of the Wadden Sea World Heritage site and the Natura 2000 network.

6. FOSTER STAKEHOLDER COOPERATION

- Facilitate exchange of lessons learned from past and ongoing offshore renewable projects to improve future project design and approval.
- Collaborate with the relevant authorities, TSOs, NGOs, municipalities, scientists, and other user groups to build a shared understanding.
- Embed the strategy within the TWSC framework, particularly through the [SIMP Integrated Management Plan for One Wadden Sea World Heritage](#) key topic, which supports integrated planning, communication, monitoring, and project coordination at trilateral level, as well as through the Ministerial Declarations to foster cooperation and commitment.

A sustainable, nature-friendly energy transition in the trilateral Wadden Sea Area requires a coordinated, cross-border effort rooted in legal obligations, political responsibility for the environment, and continuous innovation. Through trilateral intersectoral and transdisciplinary collaboration, best practice planning, and sharing knowledge and experience, we can achieve renewable energy infrastructure targets while safeguarding the ecosystem, habitats, species, ecological processes, and the OUV of the Wadden Sea World Heritage Site.

¹ Avoidance through smart site selection, project timing, optimised design, and low-impact technologies; followed by minimisation, using operational and physical measures to reduce remaining effects. Third step, restoration, seeks to re-establish habitats and ecosystem functions, while the final step – offsetting, addresses residual impacts and may include broader restoration efforts.