

## 23. Wadden Sea (Denmark, Germany, Netherlands) (N 1314ter)

Year of inscription on the World Heritage List 2009

Criteria (viii)(ix)(x)

Year(s) of inscription on the List of World Heritage in Danger N/A

Previous Committee Decisions see page <https://whc.unesco.org/en/list/1314/documents/>

### International Assistance

Requests approved: 1 (from 1991-1991)

Total amount approved: USD 5,000

For details, see page <https://whc.unesco.org/en/list/1314/assistance/>

### UNESCO Extra-budgetary Funds

N/A

### Previous monitoring missions

N/A

### Factors affecting the property identified in previous reports

Key factors identified at the time of inscription of the property needing ongoing attention include:

- Fishing/collecting aquatic resources
- Services/infrastructure/water infrastructure (harbours, industrial facilities)
- Transportation infrastructure/Marine transport infrastructure (maritime traffic)
- Buildings and development/Major visitor accommodation and associated infrastructure (residential and tourism development)
- Climate change and severe weather events/Changes to oceanic waters

Newly identified threats:

- Physical resource extraction/Mining (salt mining below the property)/Oil and gas (new gas development below the property)
- Services/infrastructure/renewable energy facilities (digging and dredging operations through the property to lay cables to connect offshore windfarms)

Illustrative material see page <https://whc.unesco.org/en/list/1314/>

### Current conservation issues

Since 2019, the World Heritage Centre continues to receive information from third parties regarding developments in the Netherlands, which could impact the Outstanding Universal Value (OUV) of the transboundary property, as follows:

- A proposal for a new gas development located in the vicinity of the property which would extend extractive activity below the property at Ternaard;
- Additional salt mining below the property;
- Planned digging and dredging operations through the property to lay cables to connect off-shore windfarms in the North Sea to on-land electricity infrastructure.

Consequently, several letters were sent to the State Party of the Netherlands transmitting the third-party information and requesting further information, including relevant impact assessment documents. Replies were received on 8 October 2019, 18 June 2020, 2 December 2020, and 20 January 2022, providing the following information:

- Salt and natural gas extraction is permitted in the property under strict conditions. These mining activities result in seabed subsidence which is compensated by natural sediment accretion;
- A new 'Coalition Agreement' concluded by the government that took office in the Netherlands on 10 January 2022 stipulated that no new gas extraction permits would be issued in the Wadden Sea;

- Regarding the proposed Ternaard gas development, the permit procedure will be assessed according to the policy in force prior to the implementation of the 'Coalition Agreement'. Production installations would be located outside the property and gas would be drilled at an angle extending below the property. In October 2019, the State Party advised that the project was in the initial phase of the permitting process. In January 2022, following third party concerns relayed by the World Heritage Centre, the State Party expressed regret that, contrary to Paragraph 172 of the Operational Guidelines, the World Heritage Centre had not been informed that the draft decisions concerning the project had been made available for inspection by residents, public authorities and civil society organisations on 27 August 2021 for a period of six weeks and therefore had not had the opportunity to provide comments. A four-page memorandum on the potential impacts of the Ternaard gas mining proposal on the OUV of the property, based on the previously completed Environmental Impact Assessment (EIA), was also provided;
- A permit was issued in September 2020 for additional extraction of 32 million tonnes of salt;
- A monitoring programme of salt and gas extraction is in place according to the 'hand on tap' principle so that extraction can be limited or halted before any negative effect occurs. The Independent Scientific Advisory Body (ISAB) established by the State Party of the Netherlands concluded that seabed subsidence resulting from gas extraction would not contribute to submergence of tidal flats, but that this was less clear for salt mining in the western Wadden Sea, where there was a reasonable chance that sediment accretion would be insufficient to offset sea level rise. The State Party will commission further studies on future subsidence capacity, but considers there is no need to limit or halt salt extraction in the short term;
- In January 2021, a preferred route was identified to connect an offshore windfarm in the North Sea to the mainland which would cross the property. In December 2021, a decision was taken to carry out an additional study to determine how the offshore wind power could be transported to shore without causing damage to the property. A Strategic Environmental Assessment (SEA) with specific reference to the World Heritage status of the area was reported to be undertaken;
- The 'Agenda for the Wadden Sea Region 2050' was adopted in February 2021. It is a voluntary framework for the Dutch Government, local and regional authorities, water authorities, the private sector and civil society organizations, providing an integrated vision for the future development of the Wadden Sea region. The 'Agenda' aims to invest in robust and resilient ecosystems so that the natural environment can accommodate the effects of climate change. Further work is foreseen to examine the cumulative impacts of human activities on the natural environment.

On 30 March 2022, the World Heritage Centre transmitted to the States Parties of Denmark, Germany and the Netherlands, a Technical Review by IUCN on the salt and natural gas extraction and the planned development of digging and dredging operations related to an offshore windfarm. In the same letter, the States Parties were informed that the state of conservation of the property would be examined by the Committee at its 45th session. A preliminary response was received from the State Party of the Netherlands on 20 May 2022, followed by the submission of additional documentation on 21 July 2022, including relevant extracts from the EIA for the Ternaard gas extraction project.

On 6 July 2022, a letter was sent to the States Parties of Germany and the Netherlands transmitting the third-party information concerning plans to develop a gas reserve called 'GEMS - Gateway to the Ems', located in the Dutch-German coastal waters and the application of the oil and gas company Wintershall Dea's for new oil drilling in the Wadden Sea National Park to extend oil production until 2069. In the response of 7 February 2023 from the State Party of Germany, prepared jointly with the Netherlands, it stated that the gas project is located outside but in the vicinity of the property. At this stage, permission to explore for and extract hydrocarbons has been granted, but the procedure requires the preparation of an EIA, in which all environmental and safety aspects will be thoroughly examined and evaluated. The letter further stated that the Wintershall Dea's application for oil production in the Schleswig-Holstein Wadden Sea National Park is still under review.

On 11 August 2022, the World Heritage Centre transmitted to the three States Parties a Technical Review by IUCN of the 'Single Integrated Management Plan' (SIMP) of the Wadden Sea World Heritage property (Draft version 0.8), dated 11 March 2022. On 21 April 2023, the Common Wadden Sea Secretariat submitted to the World Heritage Centre the finalised SIMP, developed by the Trilateral Wadden Sea Cooperation (TWSC), for formal adoption by the three States Parties in May 2023.

By letters dated 2 November 2022 and 13 April 2023, the State Party of the Netherlands provided updated information to the World Heritage Centre on the plans to connect offshore windfarms with the

onshore electricity grid by crossing the property. The Eemshaven Offshore Grid Connection Programme (PAWOZ-Eemshaven) aims to identify cable routes and techniques that have the least impact on the OUV of the property. The State Party also reported that it was investigating the option of producing hydrogen in the North Sea, north of the property, and delivering it to the mainland via pipelines investigated within the PAWOZ-Eemshaven. The State Party indicated that an EIA and an Integral Effect Analysis would be carried out and that permit for the installation of the cables and pipelines would only be approved if the possible impact was permitted under Dutch law.

On 20 December 2022, the World Heritage Centre transmitted to the State Party of the Netherlands third-party information related to a trilateral governmental agreement called 'Wilhelmshaven Declaration', for which a reply is still pending.

In addition, the World Heritage Centre has also been informed by the States Parties of Denmark and Germany, and by third parties, of several projects within and around the property, including the proposal for new windfarms and extension of existing windfarms (Germany), the deepening of the Elbe river shipping channel (Germany), the deepening of the Grådyb fairway from the North Sea into Esbjerg Harbor (Denmark), the extension of the Esbjerg port (Denmark), the installation of heating plants near Esbjerg (Denmark), new wind turbines in Tjæreborg Enge (Denmark), the construction of a new pier Romo harbour (Denmark), a planned Power-to-X facility in Esbjerg (Denmark), a planned hotel development in Rindby, Fanø (Denmark), a wind turbine test centre (Denmark), and the planned construction of floating LNG terminals in Wilhelmshaven (Germany). IUCN reviews were provided for several of these projects and for others, the World Heritage Centre is still awaiting comments from States Parties in accordance with Paragraph 174 of the Operational Guidelines.

#### Analysis and Conclusions of the World Heritage Centre and IUCN

In recent years numerous infrastructure developments have been planned or established within and in the vicinity of the property, including extractive activities (oil, salt and gas), port and shipping, and energy infrastructure.

Regarding extractive activities, the announcement by the State Party of the Netherlands that no new gas extraction permits will be issued in the Wadden Sea presents a clear commitment towards the conservation of the OUV of the property, taking into account the increasing cumulative pressures on the property from development activities, climate change and sea level rise. However, the potential approval of the proposed Ternaard gas project would appear to be at odds with this broader policy level commitment. Also noting the approval in 2020 of additional salt extraction activities in the Netherlands, it should be stressed that whilst these projects may be located or planned outside the boundaries of the property, the associated extractive activities extend to the gas field and salt deposits directly below the property. Furthermore, the proposed Wintershall Dea's oil drilling, currently being considered in Germany, appears to be situated inside the property. The GEMS gas development in Germany, for its part, is located outside the property, but within close proximity to its boundaries.

With regard to these, the Committee may wish to recall its established position on the incompatibility between extractive activities and World Heritage status. In addition, any extractive activities close to the property should be comprehensively assessed in accordance with the *Guidance and Toolkit for Impact Assessments in a World Heritage Context*, and only authorised if such assessments demonstrate that they will not have adverse impacts on the OUV of the property.

The State Party of the Netherlands reports that the main impact resulting from extractive activities below the property is seabed subsidence. As the scale of tidal flats is one of the main attributes of the property's OUV that directly supports the associated natural, undisturbed biological processes and exceptional biodiversity, it is essential that any potential impacts of the Ternaard gas extraction project are fully assessed in relation to the property's OUV. In this respect, it is noted with concern that the EIA documentation submitted by the State Party on 21 July 2022 has no comprehensive consideration for the property's OUV.

It is recalled that the property is inscribed under Criterion (viii) regarding the highly dynamic and uninterrupted natural processes of coastal deposition, and Criterion (ix), based on the fact that the property includes some of the last remaining natural large-scale intertidal ecosystems where natural processes continue to function largely undisturbed. During the evaluation of its nomination, it was understood that subsidence of tidal flats due to existing gas extraction was fully compensated by natural sedimentation. It is therefore of concern that the further subsidence of the deep subsurface due to gas extraction for the Ternaard project would lead to additional sedimentation of sand and silt in the property, requiring additional artificial sand replenishment of coastal zones from elsewhere. Consequently, the

proposed Ternaard project seems to have direct and additional negative impacts on the attributes of the OUV and would not appear to comply with the 'No-go' policy for extractive industries in World Heritage properties.

Concerning salt mining, the conclusion by ISAB that there is a reasonable probability that, in the long term, sediment accretion will be insufficient to offset sea level rise, as well as the risk of prolonged seabed subsidence once the mining operation is completed, is a matter of serious concern. Appropriate measures should be taken to address this, including a decision not to approve further salt extraction projects or other projects that may further contribute to seabed subsidence, in line with the precautionary principle, and limiting or halting existing salt extraction activities.

It is noted that the 'hand on tap' monitoring mechanism was in place at the time of the property's inscription. However, as noted by ISAB, it should be determined whether this methodology remains valid in light of long-term uncertainties, including sea level rise as a result of climate change and the rate of natural sediment accretion. It is therefore recommended that the Committee request the States Parties to adopt a precautionary and strategic approach to the management of the property, clarifying longer-term projections based on the latest scientific data on climate change for the Wadden Sea, and request the State Party of the Netherlands to ensure any necessary adaptation of the 'hand on tap' monitoring mechanism to account for these uncertainties.

Regarding offshore wind power, including the connection to the onshore grid and a potential hydrogen production north of the Wadden Sea and the associated construction of pipelines to bring it on land in the Netherlands, it is positive that an EIA and an Integral Effect Analysis will be undertaken to assess the potential impacts of the planned activities on the specific attributes, and to ensure that these do not pose a potential threat to the property's OUV. In this regard the States Parties should be encouraged to use the online *Guidance for Wind Energy Projects in a World Heritage Context*, when planning and assessing the impacts of these projects.

Considering the numerous existing and proposed extraction and infrastructure developments within and around the property in the three countries, it is recommended that the States Parties be requested to provide the World Heritage Centre and IUCN with an overview of all existing and planned extractive activities within and around the property with appropriate maps. It is also recommended that they undertake a joint SEA to assess the cumulative impacts of these multiple developments on the OUV prior to continuing to permit individual projects on a case-by-case basis. The SEA should be in line with the key principles contained within the *Guidance and Toolkit for Impact Assessments in a World Heritage Context* and be submitted to the World Heritage Centre for review by IUCN. Furthermore, in this regard, it is important that the States Parties adopt a strategic, proactive and forward-looking management approach to inform decision-making, reporting on and managing the potential cumulative impacts of these developments in order to safeguard the property and its OUV.

Acknowledging the adoption of the 'Agenda for the Wadden Sea Region 2050' in 2021 and the new SIMP for the property in 2023, it is timely for the States Parties to ensure a strengthened integrated and coordinated management approach for the property in the aforementioned manner to avoid any negative impacts on the property's OUV.

### **Draft Decision: 45 COM 7B.23**

*The World Heritage Committee,*

1. *Having examined Document WHC/23/45.COM/7B.Add.2,*
2. *Recalling Decisions **33 COM 8B.4** and **38 COM 8B.13**, adopted at its 33rd (Sevilla, 2009) and 38th (Doha, 2014) sessions respectively,*
3. *Welcomes the development of the 'Agenda for the Wadden Sea Region 2050' in 2021 and the adoption of the 'Single Integrated Management Plan' (SIMP) for the transboundary property in 2023 and strongly encourages the States Parties of Denmark, Germany and the Netherlands to adopt a precautionary and strategic approach to the management of the property, including to clarify longer-term projections based on the latest scientific climate change data for the Wadden Sea;*

4. *Reiterates its position that extractive activities are incompatible with World Heritage status, and considers that natural resource extraction below the property has the potential to adversely impact its Outstanding Universal Value (OUV);*
5. *Also welcomes the confirmation by the State Party of the Netherlands that no new gas extraction permits will be issued in the Wadden Sea, but notes with serious concern the approval of a new salt extraction project and the ongoing consideration of a proposed gas development at Ternaard, in the vicinity of the property, which would extend extractive activities below the property;*
6. *Notes with further concern that, in the Environmental Impact Assessment (EIA) process, the State Party of the Netherlands has not undertaken a comprehensive assessment of the potential impacts of the proposed Ternaard gas extraction project on the OUV of the property when, based on information available, it would appear that the project has direct negative impacts on the OUV of the property, and therefore urges the State Party not to approve the project;*
7. *Requests the State Party of the Netherlands not to approve further extractive projects, in line with the precautionary principle, to assess whether adaptation of the 'hand on tap' monitoring mechanism is required to account for uncertainties linked to climate change, and to consider limiting or halting existing salt extraction activities, as required, to effectively maintain and protect the OUV;*
8. *Also notes with serious concern the Wintershall Dea's oil development, which is currently being considered by the State Party of Germany, and appears to be located inside the property, as well as the GEMS gas development located close to the boundary of the property;*
9. *Also urges the State Party of Germany not to proceed with any proposed oil exploration inside the property and to conduct a detailed EIA, including an assessment of potential impacts on the OUV of the property, for any oil or gas extraction project that may negatively impact the property, in accordance with the Guidance and Toolkit for Impact Assessments in a World Heritage Context;*
10. *Further notes with serious concern the scientific advice from the Independent Scientific Advisory Body (ISAB) established by the State Party of the Netherlands that, as a result of salt mining, there is a reasonable probability that future sediment accretion will be insufficient to offset sea level rise and that the potential for subsidence of the seabed will be prolonged once the mining operation is stopped, and also considers that subsidence of the seabed, especially in the light of projected sea level rise as a result of climate change, could reduce the extent of the tidal flats, which are one of the main attributes of the property's OUV, and therefore directly result in a significant negative impact on the property's OUV;*
11. *Further welcomes the decision by the State Party of the Netherlands to carry out additional studies on the proposed routing to connect the planned offshore wind power installation to the mainland, through impact assessments specifically focused on the property's OUV and including an assessment of the impacts of the potential hydrogen production north of the Wadden Sea and the pipelines to be constructed for delivering the substance to the mainland, and also requests the State Party to submit these assessments to the World Heritage Centre for review by IUCN prior to a final decision on the projects;*
12. *Notes the numerous existing and proposed wind energy projects in the vicinity of the property and encourages the States Parties to use the online Guidance for Wind Energy*

*Projects in a World Heritage Context when planning and assessing their impacts and taking proactive measures for the protection and preservation of the property's OUV;*

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

## **24. Lake Baikal (Russian Federation) (N 754)**

Year of inscription on the World Heritage List 1996

Criteria (vii)(viii)(ix)(x)

Year(s) of inscription on the List of World Heritage in Danger N/A

Previous Committee Decisions see page <https://whc.unesco.org/en/list/754/documents/>

### International Assistance

Requests approved: 2 (from 1990-2000)

Total amount approved: USD 33,200

For details, see page <https://whc.unesco.org/en/list/754/assistance/>

### UNESCO Extra-budgetary Funds

N/A

### Previous monitoring missions

1997: World Heritage Centre mission; 1998: World Heritage Centre monitoring mission; 2001 and 2005: joint UNESCO/IUCN Reactive Monitoring missions; 2003: UNESCO/IUCN high-level mission; 2011: joint UNESCO/IUCN Mission; 2015: IUCN Reactive Monitoring mission

### Factors affecting the property identified in previous reports

- Gas and oil pipeline project across the World Heritage property in 2006 (*issue resolved*)
- Management System/Management Plan (lack of adequate management system)
- Legal framework (uncertain legal protection)
- Pollution from paper mill and domestic wastewater/Surface pollution
- Illegal activities (timber harvesting, construction on the lake shore, sale of land)
- Impacts of tourism/visitor/recreation (tourism development)
- Fire (wildfires in the Baikal region in 2015)
- Upstream and downstream planned and existing dam infrastructure in the Russian Federation and Mongolia/Water infrastructure
- Mining