# TRILATERAL VISION ON DARK SKY OVER THE WADDEN SEA

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# **Challenges and Opportunities**

The Wadden Sea is recognized worldwide as an area where natural processes proceed largely undisturbed. Along with the geological and ecological processes, the natural rhythm of day and night has been relatively well preserved in the Wadden Sea area as it remains one of few areas within Europe where dark night skies can still be experienced. The natural changes in light intensity between day and night are vital cues for the daily rhythms of activities in most biological organisms and thus of considerable importance for the protection of the Wadden Sea World Heritage Site.

Unfortunately, artificial light at night (ALAN) is expanding and intensifying at the global scale and the negative impacts of light pollution are increasingly becoming problematic also in the Wadden Sea region where harbours, urban and industrial settlements and offshore energy plants are among the main sources of light pollution. While light has generally been perceived as positive as it also provides a feeling of safety at night, there is now growing evidence that ALAN has negative effects on plants and animals such as birds, insects and bats. Human health can also be negatively impacted by increasing levels of light pollution. In addition, ALAN contributes to our energy consumption, and thus the increase in CO2 emissions which ultimately intensifies climate change.

The preservation of nocturnal darkness directly supports and further enhances the protection of the Wadden Sea World Heritage Outstanding Universal Value, while creating chances for visitors to experience nature, admire pristine starlight skies and making a valuable contribution to the sustainable development of local communities, as shown at the certified Dark Sky Places in the Wadden Sea region.

Against this background, the ministers recalled the importance of preserving darkness as a core quality of the Wadden Sea in the 13th Declaration on the Protection of the Wadden Sea and encouraged initiatives to develop strategies and implement projects to further reduce light emissions for the benefit of both nature and the society.

The Trilateral Dark Sky Initiative started in 2019 as an informal trilateral network group now consisting of nature management organisations and authorities, individuals, NGOs, research institutes and municipalities, with the aim of bringing together and through synergies further strengthening the existing local initiatives in the Wadden Sea region.

The trilateral approach facilitates exchange of knowledge on how best to manage the ongoing issue of light pollution. As light pollution can have a wide reach, the joint effort among geographically scattered initiatives is important for the creation of wider naturally dark sky places and corridors to mitigate the degradation and fragmentation of nocturnal habitats.

## The Dark Sky Vision

Building upon the already ongoing activities within the Trilateral Dark Sky Initiative and at the local level, to further strengthen the common efforts and enlarge the existing network, the Dark Sky Vision establishes a trilateral framework that aims at further protecting nocturnal darkness and reducing light pollution for the benefit of nature and the humankind following a transnational and cross-sectoral approach.

#### Vision:

Nocturnal Darkness in the Wadden Sea Region is further protected and restored to improve the functioning of healthy, species-rich nocturnal environments<sup>1</sup> while contributing to the sustainable development of the Wadden Sea region.

The vision is based on the following common objectives:

#### Awareness, communication and education

To achieve widespread awareness, both within society and among competent authorities, on the negative impacts of light pollution and the importance of nocturnal darkness and concrete measures to reduce light pollution.

#### Stakeholder engagement and collaboration

To promote active engagement of stakeholders who want to join forces in tackling this multifaceted issue. This will be done through facilitation of dialogue, knowledge exchange and capacity building as well as support and initiation of cross-sectoral and transnational initiatives.

#### • Best practice measures

To advocate for and implement concrete actions which constitute, among others, best practices for environmentally friendly, energy efficient and innovative lighting practices and substantially contribute to reduce light emissions.

## Policy change

To identify and analyse relevant policies on light pollution at the European, national, and regional and local levels. The development and implementation of new policies that consider the value of nocturnal darkness and/or the detrimental effects of obtrusive light shall be encouraged.

#### Research and monitoring

To facilitate research on the effects of ALAN on different organisms and to support the implementation and harmonisation of monitoring activities that support improvement of management and conservation efforts.

#### • Local communities and wellbeing

To work on further untapping the potential of nocturnal darkness and pristine dark skies in relation to, among others, true nature experiences, human health and sustainable development of local communities.

All activities will link and contribute to other strategies and initiatives in the Wadden Sea Region and beyond.

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<sup>1</sup> See IUCN motion: https://www.iucncongress2020.org/motion/084

## Framework for collaboration

The signatories of the vision recognize the value of taking a trilateral approach to preserve the Wadden Sea natural darkness and pledge their support in working towards the fulfilment of the common objectives. Support in coordinating the work, facilitating collaboration, fundraising and project development will be offered within the framework of the Partnership Hub.

# **Annex I – The Signatories**

The herewith listed signatories, signed the Trilateral Vision on Dark Sky Over the Wadden Sea:

**Acknowledging** the Dark Sky Vision which aims to encourage and further strengthen the common efforts and enlarge the existing network to protect nocturnal darkness and reduce light pollution for the benefit of nature and the humankind following a transnational and cross-sectoral approach.

**Appreciating** that the Dark Sky Vision will improve collaboration and communication between those involved in the Wadden Sea, including nature management organisations and authorities, individuals, NGOs, research institutes and municipalities, businesses and industries and the civil society.

**Declaring their intention to support** the Dark Sky Vision and its implementation where appropriate and within the limits of our responsibilities and resources.

#### **Trilateral**

• Wadden Sea Forum e.V.

#### Denmark

- Danish Wadden Sea National Park
- Wadden Sea Municipalities
   Esbjerg Municipality
   Varde Municipality
   Fanø Municipality
   Tønder Municipality

## Germany

- Andreas Hänel Dark Sky Association
- Anja Sander Dark Sky Guide
- Astronomy Association Wilhelmshaven-Friesland (Astronomische Verein Wilhelmshaven-Friesland e.V.)
- City of Cuxhaven
- Community of Pellworm
- Community of Sande
- Community of Spiekeroog
- Community of Zetel
- Hamburg Wadden Sea National Park
- Insel- und Halligkonferenz e.V.
- Institute of Avian Research, Wilhelmshaven
- Joke Pouliart Wattwanderzentrum Ostfriesland
- Karen Hohn National Park Guide
- Ländliche Erwachsenenbildung Weser-Ems

- Lower Saxony National Park Advisory Council
- Lower Saxony National Park Authority
- National Park House Wittbuelten
- Nordseebad Spiekeroog GmbH
- Nordsee-Tourismus-Service GmbH
- Ornithologische Arbeitsgemeinschaft Schleswig-Holstein und Hamburg (Ornithological Working Group Schleswig-Holstein and Hamburg)
- Ostfriesland Tourismus GmbH
- Schleswig-Holstein National Park
- Schutzstation Wattenmeer
- TANO Tourismus-Agentur Nordsee GmbH
- André Thorenmeier Dark Sky Guide
- University of Oldenburg

## The Netherlands

- Coalitie Wadden Natuurlijk
  - Het Groninger Landschap
  - Natuurmonumenten
  - It Fryske Gea
  - Waddenvereniging
  - Landschap Noord-Holland
  - Stichting Wad
- Dutch Wadden SeaPorts
  - Den Helder
  - Den Oever
  - Harlingen
  - Lauwersoog
  - Eemshaven
  - Delfzijl
- Kapteyn Instituut, University of Groningen
- Natuur en Mileufederatie Noord-Holland
- Rijkswaterstaat
- Staatsbosbeheer
- VisitWadden
- Waddenacademie
- Waddenzee Visserij Platform
- Wadvaarders