

Which topic should be covered from 2023 to 2026?

The Transformation of conventional to fossil-free Propulsion Systems at the Leisure- and Service-Shipping in the UNESCO Wadden Sea Area

- CO₂-Surge from 280ppm (pi*) to ca. 415ppm today (Pliozän)
- Worldwide/ German are presently at about 1,2°/ 1,6° C higher than pi
- Tolerable capita-emissions to keep 1,5° C is ca. 2.0 t CO2 per year
- Status Quo in Katar/ USA/ BRD: 30/ 15/ 10 t CO2 per year
- Worldwide efforts: Paris Treaty on Climate Change (2015)
- European Union: Target of 55% CO2-Reduction until 2030
- Germany: Target of 65% CO2-Reduction until 2030
- Sylt Declaration (2010): Climate Neutrality in the World Heritage Wadden Sea by 2030



The Motivation for the Project



Umwelt 🎁 Bundesamt

The 11. Trilaterale Sylt Declaration (2010)

24. "Support the global and national efforts to <u>mitigate</u> causes of climate change at the regional level, by calling especially upon local and regional competent authorities and stakeholders, to work towards <u>developing the Wadden Sea Region into a CO₂-neutral area by 2030</u> or before, putting the focus on the special threats for coastal zones by global warming and sea level rise"

Our projects to address this topic

- WATTfossilfrei (08-2021 05-2023)
- E-MobiSS (Start this summer (?))

The stock of Boats in Germany

- 2020: ca. 300T/200T motor-/ sailing-boats
- 2018: 73.000t CO2-emissions
- = ca. 0,1%/ Traffic-emissions (UBA 2020)



Why should this topic be prioritised?

Legal Requirements as addressed above

High Risks for the UNESCO Wadden Sea Area

- Anticipated rise of the seawater level (0,6m resp. 1,2m until anno 2100)
- More extreme weather conditions (storm, tide, sediment-displacement)
- Change / reduction in characteristics of habitats, fauna and flora

EU CO₂ Target Setting for Boats < 24m in Length

- 2025: Quantify emissions and increase number of electric vessels
- 2035: Electric or fuel cell propulsion represent >25% of small boats
- 2050: Zero boats with diesel engines in EU-waters (ww >50%)



Status Quo in fossil-free Propulsion Systems

Leisure and small service shipping

In **2019 France** require Marinas with more than 100 berths to allocate 1% therof for boats with electric propulsion systems

Amsterdam 2019: All new permits for the <u>commercial fleet</u> are emission free by 2024, all boats have to be emission free by 2025. All boats of the <u>recreational fleet</u> in Amsterdam City Centre have to be emission free in 2025

Deutschland/ Bodensee 2021: The three neighboring countries co-operate to support fossil-free propulsion systems - providing incentives (previliged permission)

Germany/ Worldwide 2023: The "Blue Flagg Label" will incorporate requirements for fossil-free leisure shipping into their list of criteria

Sylt/ Leeuwarden (2010/18): Declaration to "mitigate causes of climate change ... and to develop the Wadden Sea Region into a CO2-neutral area by 2030 or before"









How should the topic be implemented at the WSF?

Dissemination and Workshops

- Address new boats and fossil-free techniques (!)
- Get in contact with the relevant associations, actors etc. along the coast of the Wadden Sea
- Compare and decide on technical and operational items, standards to be used etc.
- Identify the best strategic distribution of the charging stations along the Wadden Sea coast
- Develop a common time schedule for land- and sea-based actors to start and continue the process ("hen and egg dilemma")
 - by using a Memorandum of Understanding (?)
- Involve more of the other marine World Heritage Sites
- -







Which members of the WSF or actors are needed?

Development of Shore- and On Board Technology

- Industry, trade, energy, science (?)
- Boating associations (motor / sailing)
- Port- and marina-operation
- _ ?

Dissemination and Support of Implementation

- State, regional and local government authorities
- Tourism and recreation
- NGOs on nature and environment protection
- ?

(Most of which are already members of the WSF)

https://www.waddensea-forum.org/en/wsf/forum/members)







Thanks for your attention

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The Requirements of the WATTfossilfrei-MoU

Signees from the sector "Facility Provider" (Marinas, craft harbours ...)

From 2024 - Determine the amount of generated GHG-Emissions,

- Provide fossil-free electricity at the landing stage (until 2030) and
- Allocate a beneficial or free of costs berth for fossil-free driven boats (until 2030)

From 2026 - Provide an e-charging station/ wallbox with a performance of at least 22kW,

- Provide a charging station with a performance of at least 50kW

From 2030 Compensate the remaining GHG-Emissions in the purview ("Sylt Declaration"!)

Signees from the sector "Facility User" (Leisure boat society, service shipping, etc.)

From 2024 - Disseminate information about fossil-free propulsion systems,

- Determine the amount of generated GHG-Emissions per year and
- Provide (financial?) incentives for the transformation to fossil-free propulsion systems

From 2026 - Stop the procurement of fossil-driven new boats

From 2030 - Compensate the remaining GHG-Emissions in the purview ("Sylt Declaration"!)

<u>Signees from the sector "Supporter"</u> (Associations, Communities, Institutions ...) engage themselves in the sense of the project goals

The Memorandum of Understanding for the

Transformation of conventional to fossil-free Propulsion Systems (Leisure and Small Service Boats)

- Important: No Constraints or Prohibitions for Boats in Service!
- Focus is on E-Propulsion but other fossil-free alternatives may also be applied
- Requirements are "designed" along Pending Legislation/ Cutting Edge Examples
- Requirements starting at Low-Thresholds (2024) with Incremental Steps (2030)
- Signatory Bodies may be "Facility Provider", "Facility User" and "Supporter"
- The Aim: Communicate (MoU), Co-operate (E-MobiSS), Stipulate (Incentives), Regulate (?)





Results of / and Outlook for WATTfossilfrei

- The WATTfossilfrei Memorandum of Understanding
- Impose no "constraints" to boats in service it adresses <u>new</u> boats
- The focus is on e-propulsion other ff alternatives are also applicable

- Project E-MobiSS (Provision of E-Charging stations in Marinas)

- Strategic positioning of charging stations along the Waddensea
- Lay-out of charging stations according to specific circumstances
- Provision of accessibility also from the land-side (PKW etc.)
- Project start in 2023, Project duration 18 months
- Dissemination of the Project-Goals using the "Blue Flag" label
 - From autumn 2023 the criteria will include e-charger and e-boats
- Organisation of a Working Group at the Waddensea-Hub to uplift the project goals on to the trilateral level
- Promotion of the Project-Goals at the Conference of the 50 marine UNESCO World Heritages in Denmark/ Esbjerg in 09/2023



