

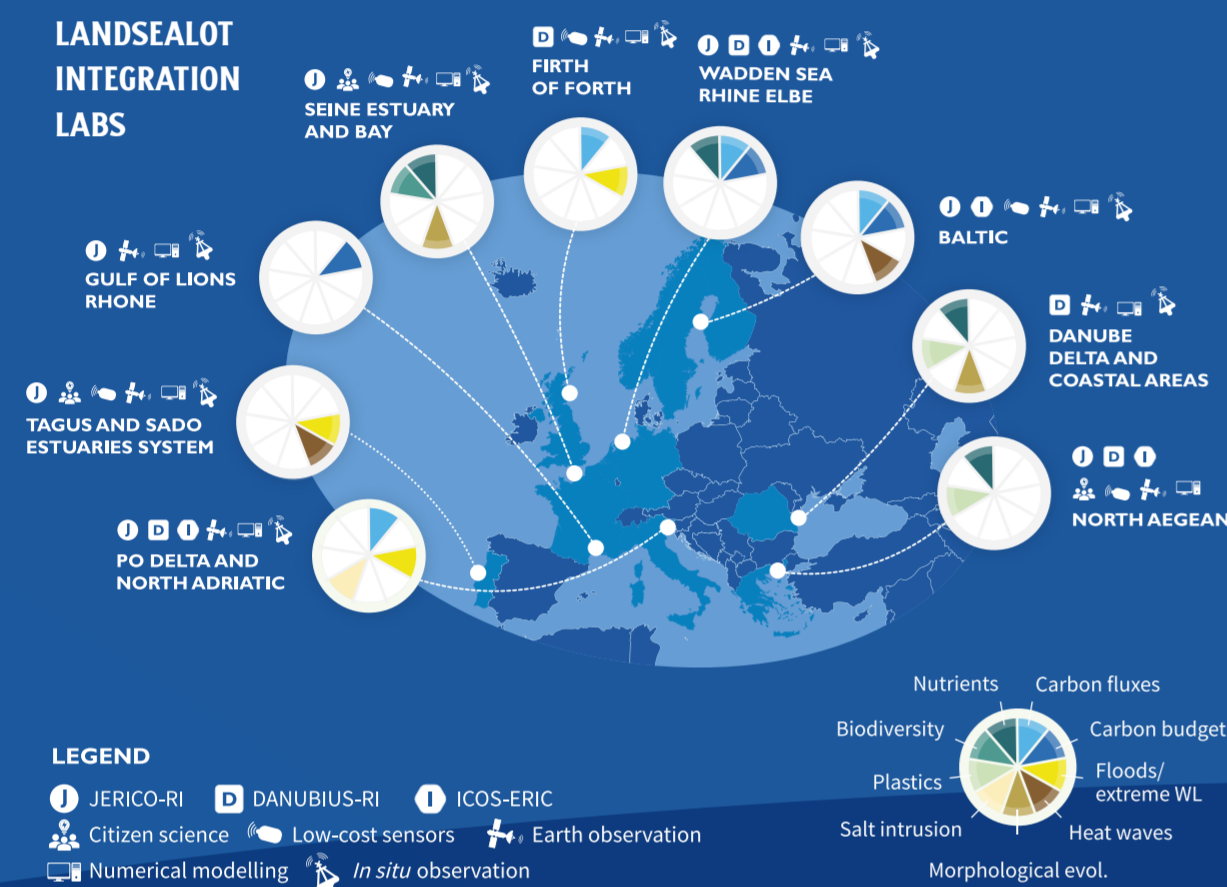


WADDEN SEA, RHINE DELTA & ELBE ESTUARY

LandSeaLot Integration Lab
Where terrestrial & marine habitats meet

What is an "Integration Lab"?

LandSeaLot Integration Labs are dynamic testing sites for developing and refining a Common Observation Strategy across land-sea interface areas in Europe. They serve as centres to test new methods and technologies, following a community-based approach to a fit-for-purpose observation of river mouths, estuaries and deltas.



About LandSeaLot

LandSeaLot is a Horizon Europe project that seeks to integrate and enhance existing coastal observation efforts - including in situ, satellite, modelling and citizen science - to better study the land-sea interface area.

Visit landsealot.eu.



Communities in action

LandSeaLot is proud to be in conversation with relevant, local organisations. Your experience living, working, or making observations anywhere in the at the Wadden Sea, Rhine Delta & Elbe Estuary is gold. With your input, we can jointly develop new capabilities and achieve great

Subscribe to the newsletter and reach out if you would like to:



scan QR code

- Help identify observation needs for this area;
- Inform the development of new, science-based data products & information;
- Onboard citizens and local communities in increasing observations.

Contact hello@landsealot.eu

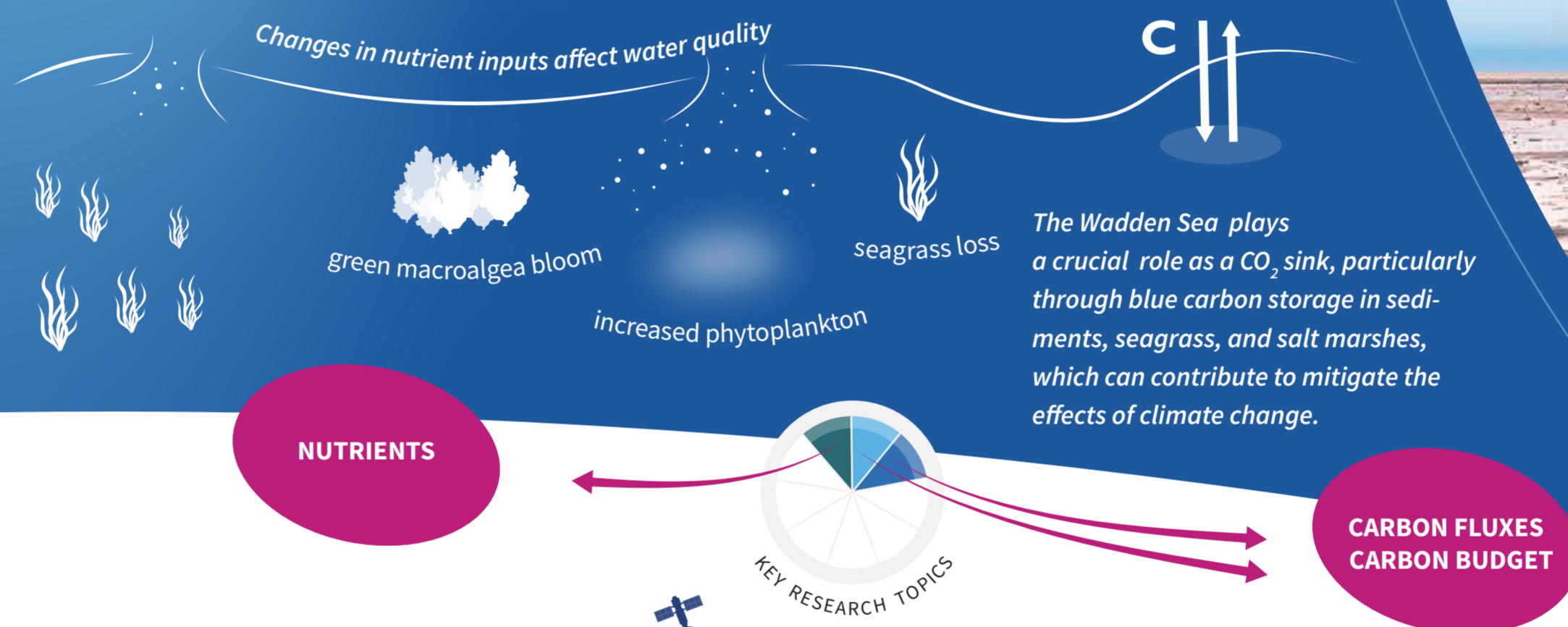
Stretching over 500 km along the North Sea coast of Denmark, Germany, and the Netherlands, the Wadden Sea is a unique sandy-muddy tidal ecosystem, which natural values have gained its recognition as a UNESCO World Heritage Site. Freshwater from the IJssel Lake sluices and the Ems, Weser, and Elbe River Estuaries contributes to its hydrology, as well as to the carbon and nutrient inputs

The Wadden Sea Region has traditionally been a key agricultural area, but tourism is now a significant source of employment, especially on the islands and in port towns. Major ports in Germany, the Netherlands, and Denmark also support important industrial activities. Around 3.5 million people live in this low-lying region. Over the past decades, the Wadden Sea has experienced major changes in carbon and nutrient dynamics, highlighting the need for further research and conservation efforts to safeguard the region's natural heritage, wellness and livelihoods.

Source: Common Wadden Sea Secretariat 2017; Alonso et al., 2024; Kabat et al., 2012



Societal relevance of key research topics at the Wadden Sea, Rhine Delta & Elbe Estuary



Empower researchers to advance knowledge
+ Collaborative research communities



Create opportunities for citizen scientists & innovators
+ Tech-ready citizen sentinels



Support local authorities, community actions & industries
+ Inspiration for future decision support products



Inform & implement policies to protect society & nature
+ Enhanced availability of integrated observation data



Water Framework Directive
Marine Strategy Framework Directive
Urban Waste Water Treatment Directive
Nitrate directives
Sustainable Development Goals (SDGs) 2, 3, 6, 13, 14, 15

What will scientists & local communities be testing in this LandSeaLot Integration Lab?

- Demonstrate how the integration of observations (*in situ* and remote sensing) and ecological models contribute to better understand how carbon and nutrients move between land and sea, and to estimate the storage or release of dissolved carbon and CO₂ in coastal zones;
- Assess how nutrients entering these land-sea interface areas impact the production of organic matter and overall ecosystem health;
- Synergies with existing citizen science projects, e.g. SOOP;
- Build stronger links amongsts European research infrastructures.

LET'S OBSERVE TOGETHER!

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