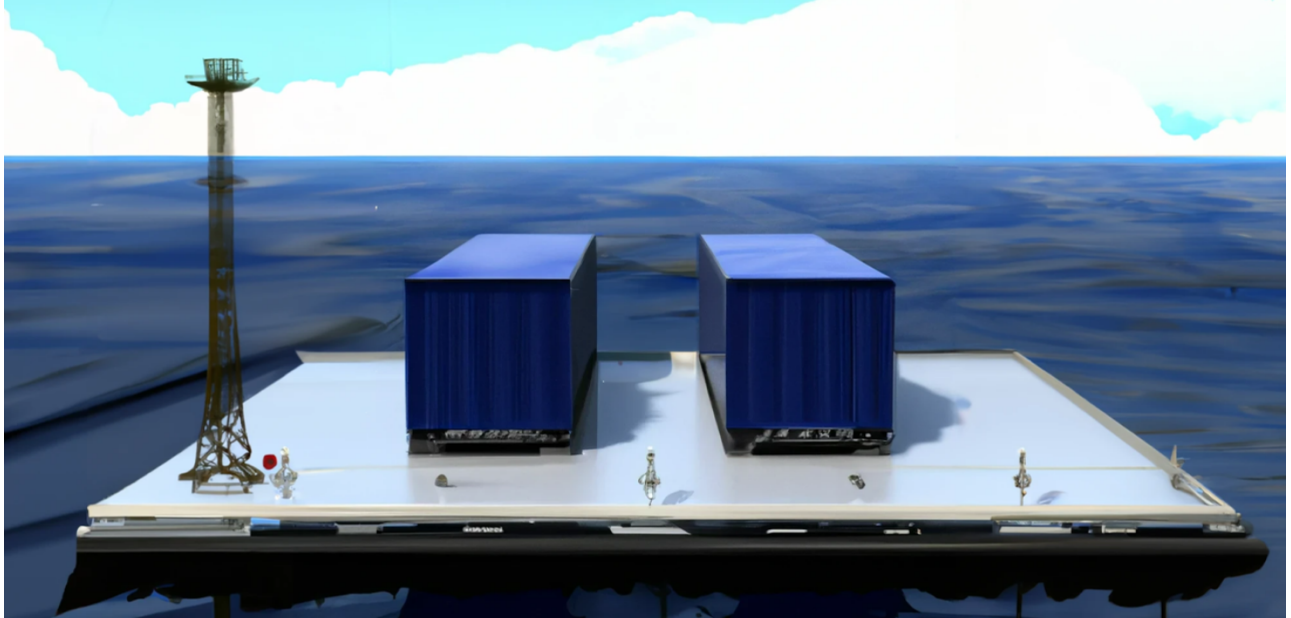




**Coast
Clim** Coastal Ecosystem
and Climate Research



Keep an eye out for our floating platform!

Keep an eye out for a floating platform full of researchers if you are boating around Stockholm University's field station Askö this summer!

The research at this floating observatory will primarily focus on the role coastal environments play in climate change.

"Sea spray aerosols, volatile organic compounds (VOCs), and greenhouse gases are crucial links between the marine environment and the atmosphere in these settings", Stockholm University researcher Matthew Salter notes.

The designer of this unique construction, Matthew Salter, presents the platform with a container housing the scientific instruments, and another container housing a fuel cell that will provide a sustainable power source. While research vessels are crucial on open waters, the mobility and cost-effectiveness of the

pontoon enables deployments for longer periods in a wide variety of truly shallow habitats.

Open for collaborations

The observatory is integral to the CoastClim research, that is combining marine ecology, biogeochemistry, and atmospheric physics to decode and measure the complex interactions between coastal habitats and climate processes. The current lack of detailed knowledge about ocean-emitted VOCs, including those from plankton and bacteria, poses a significant challenge in the field.



"While it's a Stockholm University initiative, the observatory is open for collaboration", Salter encourages, inviting researchers from various institutions to join this venture.

[Read more about the floating observatory >>](#)

CoastClim Research School: Kick-off at Askö!

14 new PhD students starting their journey at Stockholm University.

Solving complex questions about interactions between the sea and climate change, and how they relate to society, requires a broad set of skills. In a new research school, PhD students from diverse scientific disciplines at Stockholm University get a unique opportunity to learn how transdisciplinary approaches and research communication can lead to sustainable management of coastal environments.



[Read more >>](#)



Valuable first estimates:

New model to predict methane emissions in the Baltic Sea

"Modelling can be an important tool to understand the large-scale fluxes and help to reduce the knowledge gap", says researcher [Erik Gustafsson](#), Stockholm University Baltic Sea Centre, who is the lead author of a new [study on methane dynamics](#) in the Baltic Sea.

Emissions of methane from the Baltic Sea to the atmosphere can be significant and make the sea a net source of greenhouse gases. However, measurements of methane in the Baltic Sea region are still relatively few and limited to certain areas.

The researchers have further developed an already existing model that has proven useful for studying effects of nutrient inputs to the Baltic Sea and has for example been used in developing the goals of the HELCOM Baltic Sea Action Plan. The further developed model now also includes methane fluxes, which can provide important knowledge about the climate impact of the Baltic Sea.

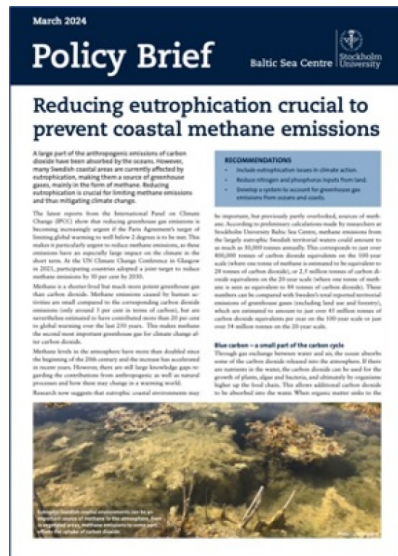
A very important first step

This study is likely the first to include methane in such a model and provides a valuable first estimate of methane emissions. The model comprises the entire Baltic Sea, however, due to its coarse resolution, it is not fully representative of the shallow coastal areas. At the same time, these areas are probably the most important in terms of how much methane reaches the atmosphere.



The goal of the CoastClim researchers is now to conduct more measurements in different types of coastal areas and then develop the model further.

[Read more about the results >>](#)



Want to understand more about methane emissions in the Baltic Sea?

Read the new policy brief that explains why methane is such a strong greenhouse gas, and why we need to reduce eutrophication to prevent methane emissions. The policy brief is written by the CoastClim researchers Erik Gustafsson and Christoph Humborg, and it is a part of a series of science summaries published by Stockholm University Baltic Sea Centre.

[Read the policy brief >>](#)

HELCOM 50-year anniversary!

HELCOM is a unique international collaboration across all countries surrounding the Baltic Sea. This spring, it is 50 years since the first agreement among all countries, the Helsinki convention, which developed into HELCOM. This was a very important step for the Baltic Sea.

"Without the successful cooperation in HELCOM, the Baltic Sea would likely be in a much worse shape today", comments researcher Bo Gustafsson, whose modelling team has made important contributions to the development of the Baltic Sea Action Plan and HELCOM's continuous work.

CoastClim wants to congratulate HELCOM and we are proud to have a researcher like Bo on our team!

[Read more about HELCOM and researcher Bo Gustafsson's valuable work >>](#)





Finland is now an official part of the EMBRC network!

EMBRC stands for European Marine Biological Resource Centre, which is a consortium for marine biology and ecology research, especially providing access to marine organisms and ecosystems, and experimental facilities and technological platforms across Europe.

The Finnish EMBRC activities are organised as part of FINMARI and lead by Tvärminne Zoological Station (University of Helsinki). The other Finnish partners include the Archipelago Research Institute at Seili (University of Turku), Husö Biological Station (Åbo Akademi University) and the marine laboratories of the Finnish Environment Institute. The partners will offer access to marine stations and institutes along the Finnish coastline, including field sampling capabilities (vessels, boats, equipment; also for winter and ice conditions), experimental facilities, analytical services, algal culture collections as well as long-term marine data series.

Sweden is also a relatively new EMBRC member, which means that Sweden and Finland jointly can develop marine research infrastructure services. This will increase our visibility across Europe, facilitate new collaborations and open new doors for utilising the network's infrastructure and participating in pan-European projects. This is good news also for CoastClim!





Who are we?

Meet a CoastClim researcher:

Who are you?

My name is Anna Villnäs and I work as a researcher at Tvärminne Zoological Station and as the research coordinator of CoastClim. My research focus on seafloor ecology, and I am especially motivated to learn how biodiversity matters for ecosystem function and how this relationship is affected by environmental change.

What are you doing in CoastClim and why?

Benthic fauna, such as bivalves, crustaceans and polychaetes, are not only small and beautiful, but they form a large living organic carbon stock, and are thus important for recycling carbon reaching the seafloor. Within CoastClim I explore how benthic animals react to disturbances, modify their environment and affect essential ecosystem functions, such as carbon and nutrient retention and recycling. I want to know how climate change affect the biodiversity patterns of seafloor communities, and what the subsequent consequences for the ecosystem are. I also enjoy coordinating research in

CoastClim, as it offers a great opportunity to discuss science with researchers from widely different disciplines!

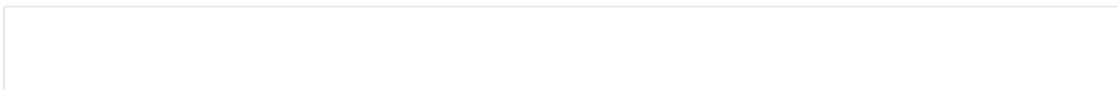
My recommendation to you...

Find time to stay creative and curious; dive into the sea and observe our amazing habitats and species, read the latest papers and books and take the opportunity to discuss science with colleagues and friends! Enjoy the spring watching nature waking to life.

Meet the [CoastClim team](#)!

Short news at a glance

- Swedish Climate and Environment **Minister Romina Pourmokhtari** [visited Stockholm University Baltic Sea Centre](#).
 - **Baltic Breakfast presentation and new policy brief:** [Ocean acidification - an emerging problem also in the Baltic Sea](#).
 - **New CoastClim publication by Elias Broman et al.** [Biotic interactions between benthic infauna and aerobic methanotrophs mediate methane fluxes from coastal sediments](#).
 - **New CoastClim publication for young minds by Leena Virta et al.** [Salty, brackish, or fresh – salinity matters for aquatic species](#).
 - **New CoastClim publication by Leena Virta & Per Hedberg** [Declining salinity and increasing temperature reduce the diversity and resilience of benthic diatoms](#).
 - **New CoastClim publication by Saara Mäkelin et al.** [Linking resource quality and biodiversity to benthic ecosystem functions across a land-to-sea gradient](#).
 - **New CoastClim publication by Roel Lammerant et al.** [Seasonality strongly affects short-term C-storage in coastal macrophyte communities](#).
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CALENDAR:

24-25/4 CostClim Spring meeting at Tvärminne Zoological Station

4/6 CoastClim event in Helsinki for funders and supporters



Remember the European Parliament elections - they matter for the sea!

On 6-9 June, EU citizens will elect their representatives to the European Parliament. And if you care about the sea and the climate, you should care about who you elect to the Parliament. The majority of environmental issues in our countries are governed by EU policies.

[Read about the Parliament's organisational structure and work processes >>](#)

CoastClim

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