



Successful field expedition

In August, Stockholm University's research vessel *Electra* set off across the Baltic Sea for a <u>multidisciplinary expedition</u> in the Finnish archipelago. Through extensive sampling of sediment, water and air, CoastClim researchers mapped how much methane (a powerful greenhouse gas) from the seafloor reaches the atmosphere in coastal waters.

Ten researchers, with expertise in oceanography, biogeochemistry, biodiversity and microbial processes went to different sites around Tvärminne Zoological Station.

With much data collected, the team now looks at how much methane is formed in these environments, how much of it is "filtered" out through the water column, and how much finally reaches the atmosphere and impacts our climate.





Novel CoastClim results presented at ICOS

CoastClim scientists Ivan Mammarella and Florian Roth presented novel results on how coastal ecosystems can have a role in climate change mitigation. The overarching theme of the 5th ICOS Science Conference in Utrecht, Netherlands conference was "Tracking progress to carbon neutrality".

<u>ICOS</u> is a global research infrastructure network to produce standardized, highprecision and long-term observations and facilitate research to understand the carbon cycle and to provide necessary information on greenhouse gases.









Happy atmospheric researchers got new instruments!

In June-September atmospheric researchers Roseline Thakur and Maija Peltola from <u>INAR</u> installed state-of-the-art instruments including mass spectrometers at Tvärminne. These instruments give us real-time high-resolution data of trace gases. Trace gases promote particle formation and their growth in the air. This growth of particles may lead to the formation of clouds, which can alter the climate.

To know the sources of the trace gases we study what is emitted from the sea and the forest around the station and in the surrounding area. After testing and installing the instrument Roseline and Maija conducted the first field experiments to study the emissions of gases from algae and the surrounding sea by using floating glass chambers.

Annual Meeting in Stockholm

All CoastClim collaborators gathered in Stockholm at the <u>Baltic Sea Centre</u> for two days for updates about everybody's progress and preliminary results. We got to hear about a lot of exciting new results that increase our understanding of the dynamic processes of carbon cycling and greenhouse gases. We will keep you posted!



CoastClim has started a five-year collaboration with Neste

- We are extremely pleased that more and more actors are getting involved in creating a framework for new basic research. To implement a research centre of this scale and create new knowledge, we need broad support, says Alf Norkko, Professor of Baltic Sea Research.



Neste is the world's leading producer of renewable aviation fuel and renewable diesel, as well as renewable raw material solutions for the polymer and chemical industries. <u>Read the news item here!</u>

Short news at a glance

- Professor Christoph Humborg participated at the the Baltic Sea days at Almedalsveckan. Watch it <u>here</u>!
- New CoastClim article published: Stranne et al. (2022) on the role of microorganisms on methane emissions from the seafloor: <u>Anaerobic</u> <u>oxidation has a minor effect on mitigating seafloor methane emissions</u> <u>from gas hydrate dissociation.</u> Read more <u>here!</u>
- New CoastClim article by Göbeler et al. (2022) "<u>Ninety years of coastal</u> monitoring reveals baseline and extreme ocean temperatures are increasing off the Finnish coast" revealing that the sea has warmed up.
- CoastClim has attracted a lot of attention in major media. In Finland: <u>Yle</u> <u>Uutiset</u>, <u>Helsingin Sanomat</u>, <u>Hufvudstadsbladet</u> and <u>Ålandstidningen</u>. In Sweden: <u>Dagens Nyheter</u>, <u>SVT</u> and <u>Aftonbladet</u>.



Who are we?

Meet a CoastClim member:

Who are you?

I am Gun Rudquist and work as <u>Head of Policy</u> at the Stockholm University Baltic Sea Centre, BSC. My background is in agriculture – both my upbringing and my studies. But I ended up working with broad environmental issues, always linked to societal change.

What are you doing in Coastclim and why?

My role in CoastClim is to link the research to what is going on in the rest of the society, especially at policy level, national or European. Results from CoastClim must be synthesised at the right time in a format suitable for different stakeholders.

My recommendation to you...

Get involved in policy. Talk to policymakers. Everybody can make a change. The universities have so much knowledge that is needed at decision level. There is in general a scarcity of researcher who have the time, possibilities and know how about how to get involved in policy. Knowledge brokers like us at the policy unit at BSC can be of assistance.

Available positions

Four positions open. For more details about the positions, please contact <u>alf.norkko@helsinki.fi</u> or <u>christoph.humborg@su.se.</u> Apply by January 15, 2023.

Tvärminne Zoological Station and the *CoastClim* Centre is inviting applications for the following 4 positions in Marine Ecology and Marine Systems Ecology.

- 1. University researcher in Marine Systems Ecology (5 years)
- 2. University researcher in Marine Ecology (5 years)
- 3. Post-doctoral researcher in Marine Systems Ecology (3 years)
- 4. Post-doctoral researcher in Marine Ecology (3 years)

For the university researcher positions, we are looking for advanced post docs to more senior scientists that have strong and well documented experience and track-records in their fields. We seek scientists that can develop successful research projects that have potential for further development and extramural funding. Successful applicants will work in a trans-disciplinary manner and foster collaboration within CoastClim. For all the positions close collaboration will be expected with the Baltic Sea Centre at Stockholm University, but position 3 (post doc in Marine Systems Ecology) will have Stockholm as a primary placement.

In terms of experience and profile we are inviting applications broadly. For the Marine Ecology positions, we invite applications from scientists that have experience in, for example, biodiversity and ecosystem function-relationships of coastal animal and plant/algal communities, carbon and nutrient cycling, habitat mapping, and/or habitatfunction relationships. For Marine Systems Ecology, relevant skills may include carboncycling and greenhouse gas dynamics in coastal ecosystems, microbial ecology, energy flows, food webs, systems ecology, and/or modelling of carbon and nutrients.

Successful candidates should have the proven capability to conduct independent research, publish in scientific journals and have excellent analytical and methodological skills. In addition, the candidates are expected to have good communication skills and the ability to work both independently and collaboratively in a multidisciplinary working community.





Spread the word!

Do you need information about CoastClim? We have flyers available in three languages: English, Swedish and Finnish. Get in contact with us at <u>coastclim@helsinki.fi</u>



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