

What do we do about the climate crisis?

A short report about the climate conference CN-NOW at Alision end of September 2023.

During the past two days, a crowd of people met in Sønderborg at SDU at the 100% Climate Neutrality Conference to discuss the current state and solutions to the climate crisis from a local border region and global perspective. The conference (www.cn-now.eu) was the 7th in a cross

100% CLIMATE NEUTRALITY
Pathways towards a smart society

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border series, organized by SDU under the lead of the Mads Clausen Institute and with Project Zero, Geomar, Hochschule Flensburg and WTSH as partners. On the one hand, as both the rector of SDU, Jens Ringsmose, and the head of SDUs climate cluster, Sebastian Mernild, pointed out in their speeches, we see the effects of the warming in all countries with warmer periods and weather extremes. On the other hand, cities in the cross border areas are doing quite well in changing technologies and behaviour to face the challenges – as both the mayor of Flensburg, Fabian Geyer, and the vice-mayor of Sønderborg, Stephan Kleinschmidt, phrased.

WELCOME TO 100% CLIMATE NEUTRALITY - PATHWAYS TOWARDS A SMART SOCIETY

We aim to bring decision makers, researchers and industry representatives together to identify future ways of reaching 100% climate neutrality. Attendees are invited to enter a dialogue about the best solutions for reaching their climate goals on city, regional and national levels.

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It is quite unlikely that we will meet the 1.5 degree limit, and we will have to face the resulting climate changes in a time of polycrises. The conference – as Horst-Günter Rubahn mentioned in his opening – is supposed to be a place for an open and interdisciplinary discussion about the climate crisis itself and ways out of it. It showed some ways to tackle part of the challenges, and so I would like to highlight a session where we contributed with research in our border region.

In the session chaired by Jacek Fiutowski, we received impressive and scary insights from Jennifer Baltzer from Wilfrid Laurier University in Canada about the wildfires Canada faced this summer. Very unusually, the fire season has continued over the month of September. It demonstrated the challenges humanity faces all over the globe and the need to act.

In science, we are concerned and develop ideas to tackle the problems. Many scientists worldwide put a lot of effort into investigating the causes and effects of the disruptive changes around us.



Session 4 presented two Interreg projects: [PlastTrack](#) and [PRECISE](#).

Both projects contribute to addressing pertinent problems and trying to find solutions. In the case of PlastTrack, we track how plastic is distributed and encourage stakeholders to enter a dialogue about the production of plastics and how it could be done more sustainably. There is no doubt that we will also use plastic in the future. Also, as Elvis Genbo Xu pointed out, there is some need for plastics in our way of living, and we need to adjust how we handle it, not to dump it into the soil and the ocean. The group of Elvis Genbo Xu is working in Biology with a particular focus on ecotoxicology. One part of the solution could be using plants and jellyfish to filter plastics out of the water.

In the PlastTrack project, we investigate how plastic degrades in aquatic environments and encourage a dialogue with stakeholders to minimise uncontrolled environmental release. Sebastian Primpke from the Alfred Wegener Institute pointed out some challenges we face when collecting plastic waste from the water. We must carefully monitor how we extract and analyse samples to avoid drawing incorrect conclusions. Therefore, it takes time and effort but needs to be done to reach reasonable solutions.

Another example of a research project is PRECISE, presented by Roana de Oliveira Hansen. PRECISE addresses the food waste problem, which counts for 10% of our CO₂ emissions. The main reason for waste is the lack of tools for determining food freshness and expiration dates. When restaurants and supermarkets are in doubt about the product freshness, they have no choice but throw the product out. But there are ways to limit food waste. At SDU Sønderborg we have joined forces with regional partners and developed an electronic nose, able to predict sample-specific precise values for expiration dates of fish and meat products. Interested retailers can already contact us for testing, thus helping to improve the sensor and limit food waste. (contact: info@precisesensor.eu). We demonstrate the sensor on Saturday in Sønderborg during an event against foodwaste.

These examples and the conference in general show that cooperation across borders and the discussion with industry, politics as well as the impact on the public can have a true impact when discussing solutions to climate induced problems. Earlier in the conference, Alexander Brem compared the development and efforts taken during the pandemic to fight the COVID-19 virus with what is needed to fight the climate crisis. We need the same spirit and agreement across all disciplines and invest all our efforts to diminish the effects of climate change and related challenges. Jørgen Mads Clausen from Danfoss highlighted that green production is possible (reduce, re-use, be renewable) and financially affordable – the climate neutrality of Danfoss (since 2022) is a good proof of that.



Image: Roana de Oliveira Hansen, Elvis Genbo Xu and Sebastian Primpke