



Climate and Environment: Carbon Reduction and Resource Efficiency

Webinar 25 November 2025
12:00–15:00 CET

Andreas Backstrom, Svevia AB 15
min

Circular salt for sustainable road maintenance

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Organization

Why

What is circular salt

The feasibility study

Project

Current situation

- Questions



Climate and Environment – Carbon Reduction and Resource Efficiency webinar, on Tue 25/11/2025 9:00 AM - 3:00 PM (CET)

Cirkulärt salt



Christer
Andersson
Via **PM**



Fredrik Eide



Andreas Bäckström





Industry projects to implement Circular Salt

VINNOVA

SVEVIA



CONSALT AB

*Friggeråkers
Verkstäder*



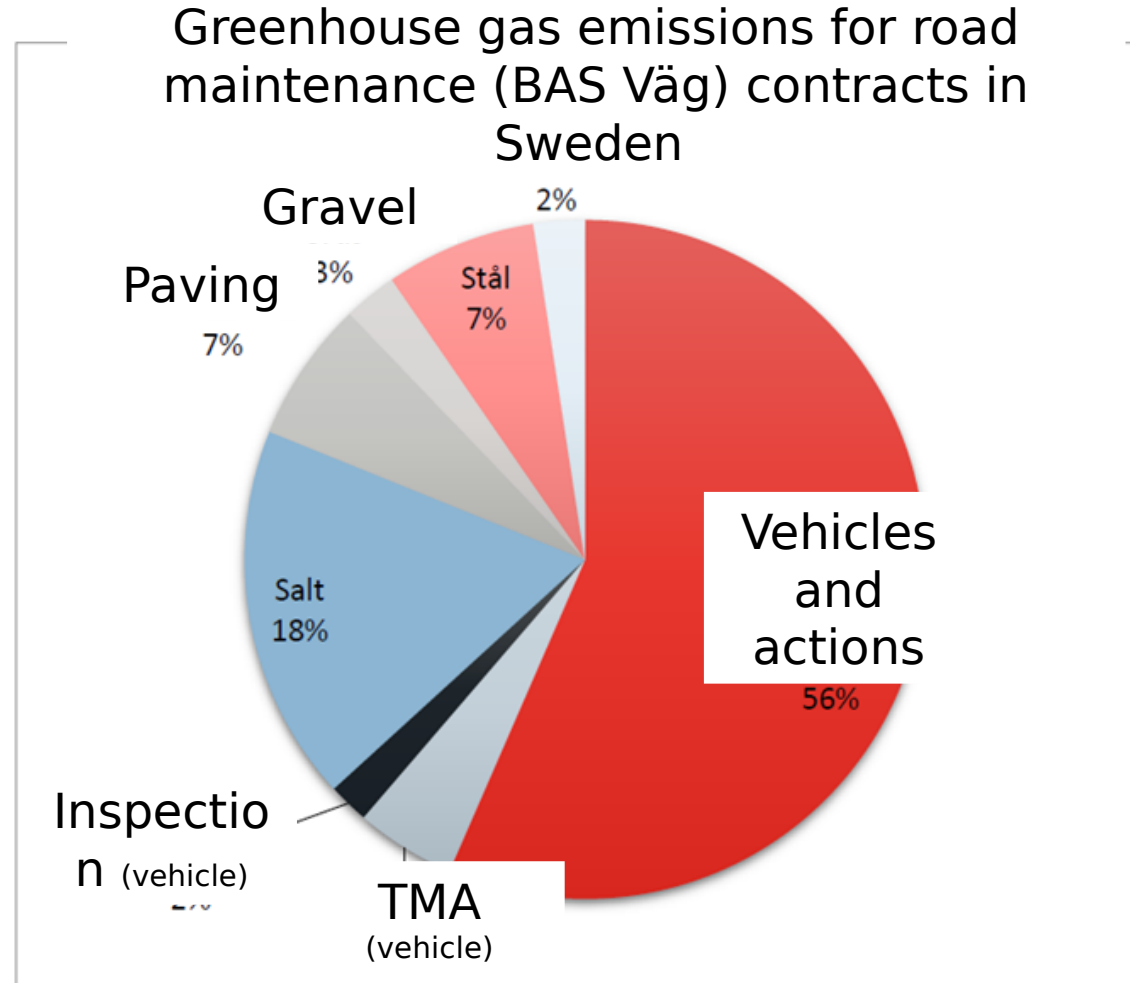
Why ?



Climate-neutral infrastructure by 2040

FÄRDPLAN FÖR
FOSSILFRI KONKURRENSKRAFT
**Bygg- och
anläggningssektorn**

Greenhouse gas emissions from base road is 18%



Figur 1 Fördelning av växthusgasutsläpp kopplade till vägunderhåll i baskontrakt, beräknat på genomsnitt för 10 utvalda baskontrakt

Cinis Fertilizer



Cinis Fertilizer is a green-tech company started in Sweden.

Cini's first production unit is located in Köpmanholmen in Örnsköldsvik.

The business concept is to produce environmentally friendly salts such as mineral fertilizer and road salt through innovative upcycling



What is circular salt

Cinis upgrades residual salts from various processes to two new salts, Sodium chloride (road salt) and potassium sulphate (a mineral fertilizer).

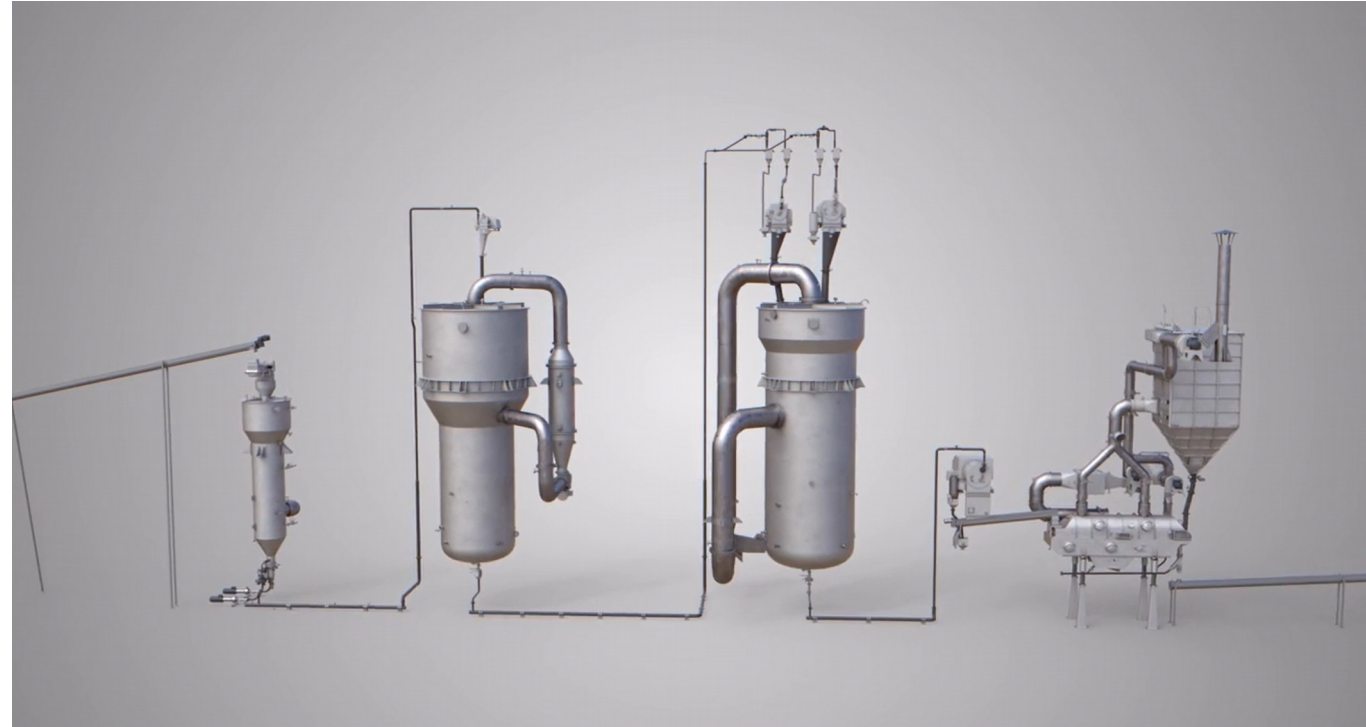
The salts come from:

Battery manufacturing

Papermaking

- Other industry

Today, some of these salts are released into the Baltic Sea, which Cinis wants to change.



Why is it environmentally friendly?

Sweden has no natural salt deposits, which is why we have to import road salt.

Since Cinis takes care of residual salt and that it is used again, instead of it being released, you make a big environmental gain.

The benefits are:

Locally produced salt

No transport from Europe or the Mediterranean

Low energy costs in the process

No fossil energy sources, only Swedish electricity

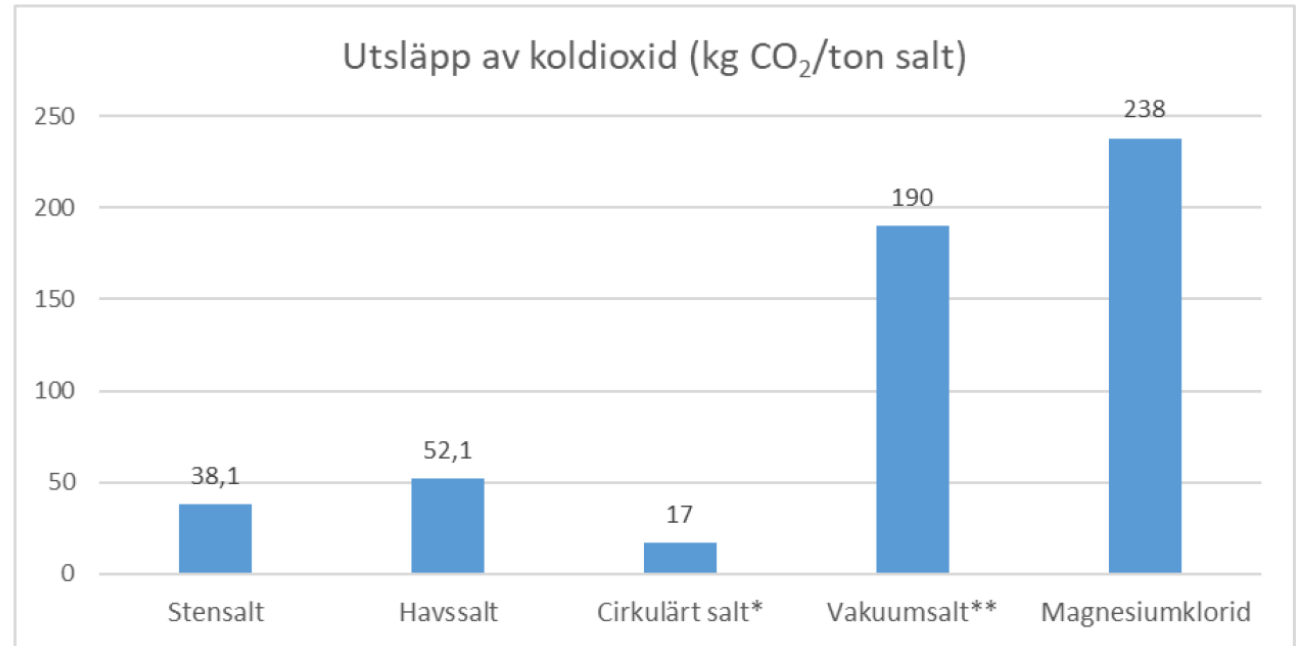
- Refining residual streams



Reduction of emissions

In the feasibility study, the production of Circular Salt was compared with other salts used on the Swedish market.

Since the circular salt is produced locally and with Swedish electric power, CO₂ emissions can be significantly reduced.



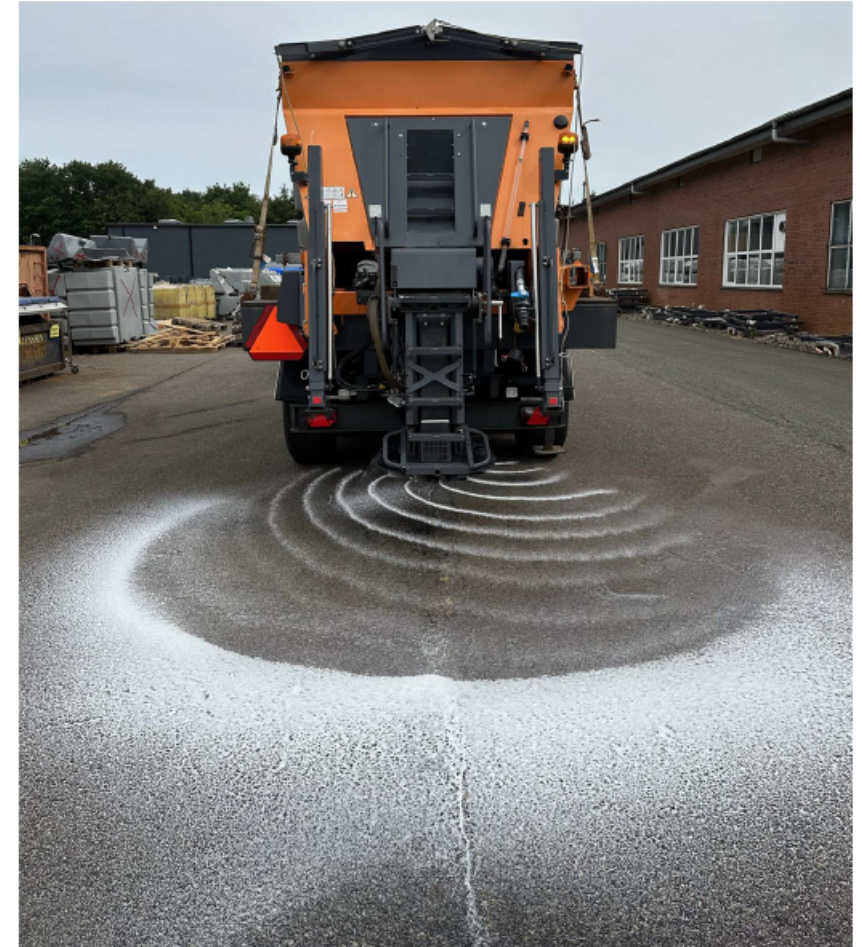
Figur 5.1: Utsläpp av koldioxid för olika typer av vägsalter. Magnesiumklorid är inlagd som jämförelse. Ingen officiell siffra på kalciumklorid kunde hittas. (Aase teknik AS & Eide F, 2023).

Feasibility study – Circular salt

Cirkulärt salt – En förstudie

The purpose of the feasibility study was to identify the opportunities that the use of circular salt can provide.

- Another purpose of the feasibility study was to identify the conditions required for the transition to the use of circular salts. This is with the aim of achieving sustainable road maintenance and emission-free maintenance contracts.



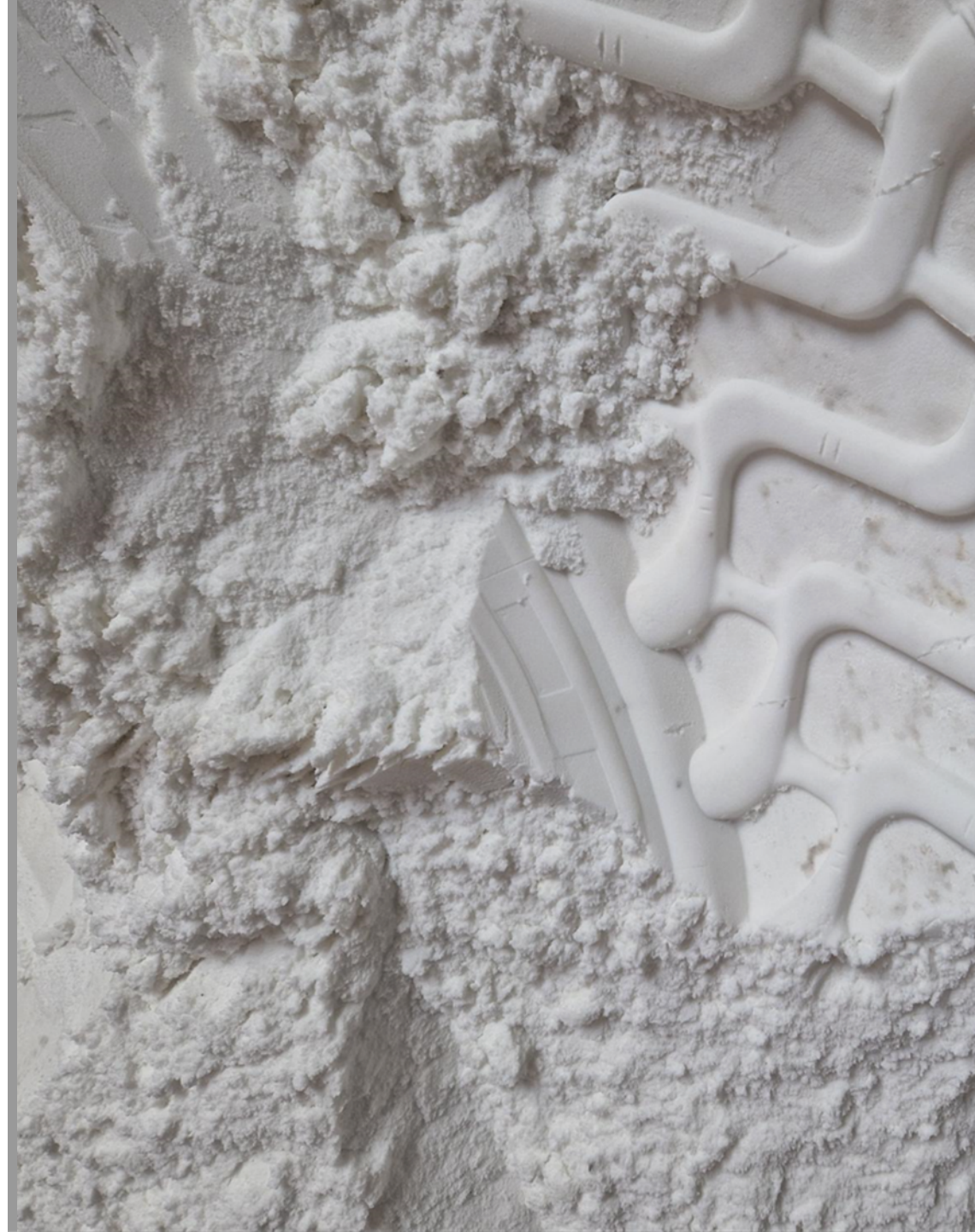
Conclusions of the feasibility study

The preliminary investigation concluded that there is both **available technology** and knowledge in Europe for Sweden to be able to use circular salt in winter road maintenance.

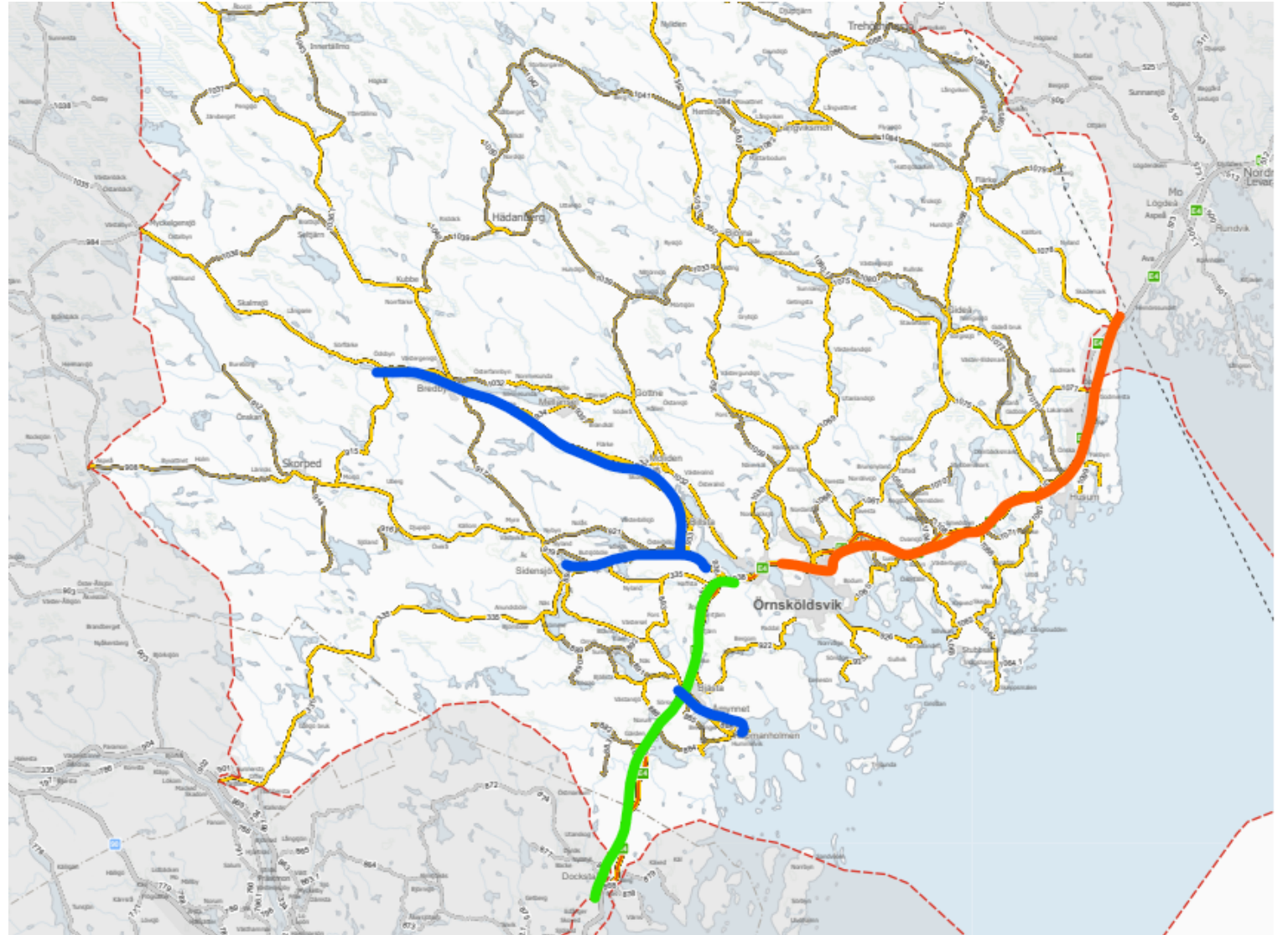
Saline production today is **not fully developed** to be able to use circular salt in our continuous saturators.

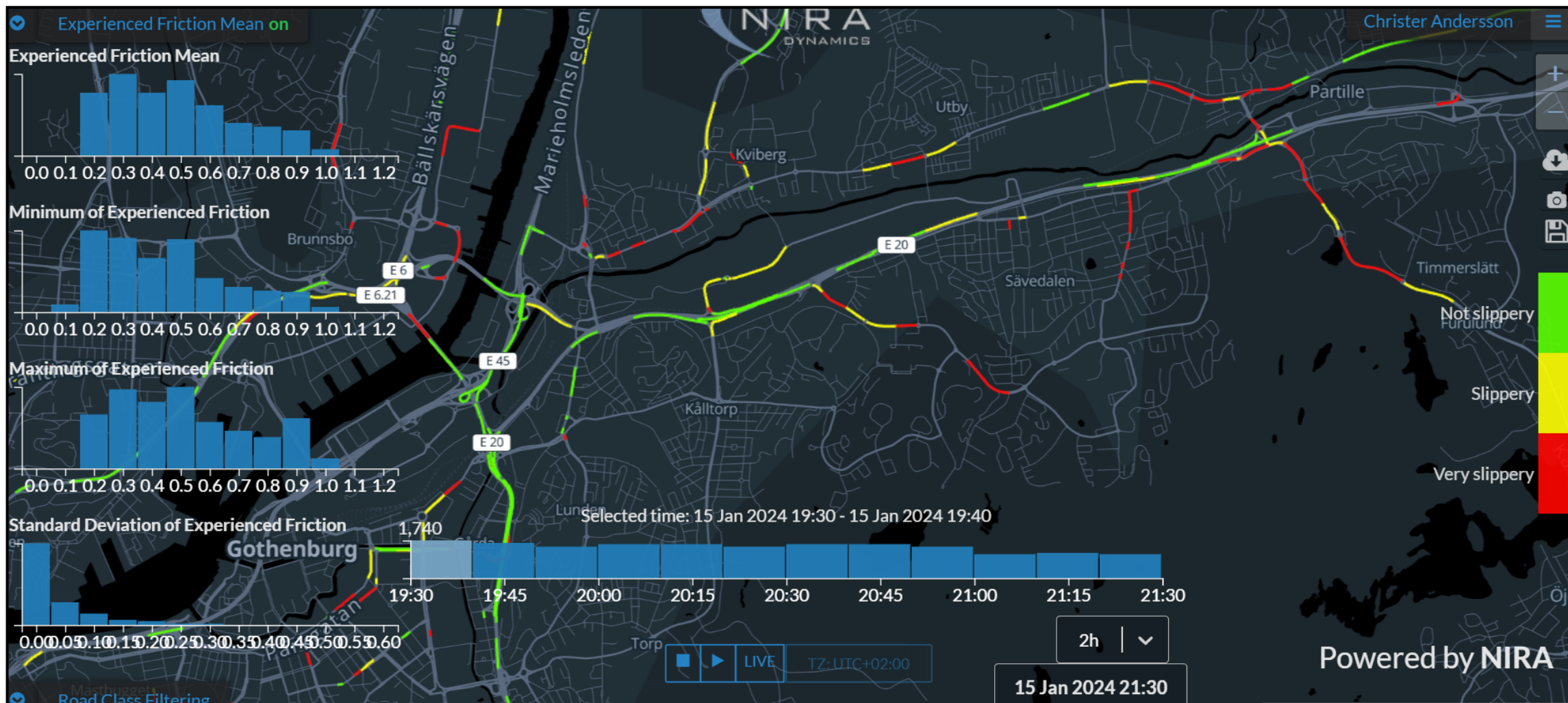
Invest in equipment and learn **new working methods** to be able to spread a humidified circular salt.

- Circular salt has good conditions to make an important contribution in **reducing the CO2 footprint**



The salt road network, Örnsköldsvik



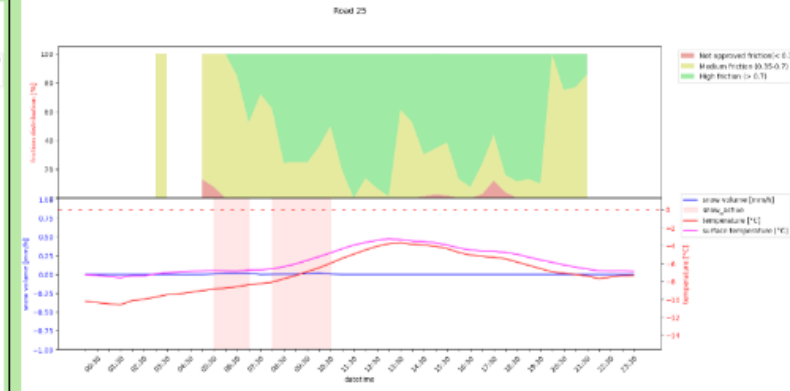


Real-time friction data

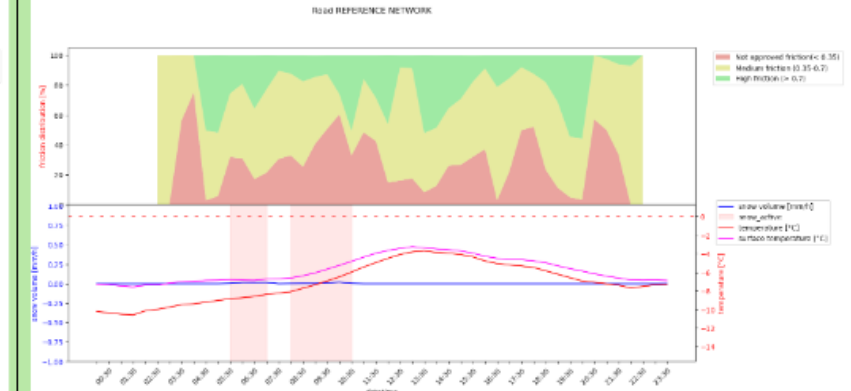
Graf E4



Graf Rv25



Graf Referensväg



(KPI) Key performance index – Characteristic friction on:

Selected road section (3)
 Selected time range
 Preventive slippery slopes

- Compare with reference road networks that are



Here we are
now

We have test-driven with about 90 tons of salt, which is not as pure as the finished product is when salt production is tuned.

The project is to perform and validate the use of fine-grained circular salt with a focus on:

The process of making brine from circular salt.

Spreading of fine-grained circular salt.

Validation and evaluation of method for winter road maintenance with circular salt.

Identify necessary adaptations in requirements and regulations linked to Road Maintenance Contracts.

- Cost/benefit analysis of the transition to circular salt.



Thank you for your time !

QUESTIONS?

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