



The 2nd Swedish Conference on Sewage Sludge Biochar

Studio Meetingpoint, Malmö, Sweden

Pre-conference study trip, 14 October

12.00-18.00. A study trip to the full-scale sewage sludge drying and pyrolysis plant at Fårevejle Renseanlæg in Denmark. The bus trip starts and ends at Malmö Central-station, Sweden.

Programme 15 October

- 8.30 Registration and coffee
- 9.00-17.40 Presentations, including coffee breaks and lunch
- 17.45-20.00 Networking, food & drinks

Programme 16 October

- 8-8.30 Coffee
- 8.30-15.00 Presentations and panel discussions including coffee breaks and lunch
- 15.00-16.00 Coffee & networking

Study visit, 17 October

8.30-12.00. Visit the pilot-scale sludge drying and pyrolysis facility in the Testbed Ellinge project, Eslöv, Sweden. A bus takes you there and back to Malmö.



TUESDAY 15 OCTOBER, 2024

08.30-09:00 Registration and coffee

09.00 Introduction

Welcome

Karin van der Salm, Director of VA SYD, Sweden

Testbed Ellinge

David Gustavsson, VA SYD/Sweden Water Research, Sweden

09.30 General

Perspectives for sludge biochars as a route for nutrient recycling

Christopher Thornton, European Sustainable Phosphorus Platform

A holistic approach to solving the sewage sludge issue on an industrial scale

Juergen Jelly, L-recycling, Austria

Advances in research for the deployment of sewage sludge Advanced Thermal Conversion in the UK

Stephen Riches, AtkinsRéalis, United Kingdom

10.20-10.40 Coffee break

10.40 Technology presentations

VOW ASA

Pål Jahre Nilsen

Pyreg

Marcel Rensmann

Next Generation Elements

Daniela Meitner

Eliquo Technologies

Maria Dittmann

AquaGreen

Christian Wieth

11.40 Sludge biochar characteristics

Assessing biochar physical properties by synchrotron based X-ray tomography

Anna Strandberg, Umeå University, Sweden

12.20-13.20 Lunch

13.20 Sludge biochar and phosphorus

Persistence of carbon in sludge biochar

Haichao Li, Swedish University of Agricultural Science, Sweden



RE-CORD process "Charlene" – Selective recovery of biocoal and phosphorus from sewage sludge
Andrea Salimbeni, RE-CORD, Italy

Effect of pyrolysis temperature and pre-treatment with NaOH on plant P availability in different sewage sludge biochars
Dorette Müller-Stöver, University of Copenhagen, Denmark

14.40-15.10 Coffee break

15.10 Removal of micropollutants

Organic micropollutants in sewage sludge and sewage sludge biochar from a full-scale pyrolysis plant in the Czech Republic
Jaroslav Moško, Institute of Chemical Process Fundamentals of the CAS

Towards the integration of anaerobic digestion and pyrolysis processes to promote micropollutant removal and energy production from sewage sludge
Céline Vaneeckhaute, Université Laval, Canada

15.50 Co-pyrolysis

Substrates for sewage sludge co-pyrolysis: analysis of product yield and characterisation
Michael Biney, University of Warmia and Mazury in Olsztyn, Poland

16.10 Different projects

CarboMass - Barriers and opportunities of the innovative approach to sewage sludge utilization in Germany

Victoria Klages and Anja Schreiber, Hochschule Nordhausen, Germany

SLUDGEFFECT

Pål Jahre Nilsen, VOW ASA, Norway

RenCARBio

Maria M. Estevez Rego, Aquateam COWI, Norway

Sludge pyrolysis for a circular system (SpyCO)

Dolores Öhman, Hässleholm Miljö, Sweden"

Sustainable use of sewage sludge in Northern Sweden

Torben Bauer, LUMIRE, Sweden

17.20 Summary day 1

David Gustavsson, VA SYD/Sweden Water Research and
Anders Finnson, Svenskt Vatten

17.45-20.00 Networking, food and drinks



WEDNESDAY 16 OCTOBER, 2024

08.00-08:30 Coffee

08.30 Pyrolysis – full-scale

Progress in full-scale sewage sludge pyrolysis plants in the two last years

Maria Dittmann, Eliquo Technologies

The first full-scale sewage sludge pyrolysis plant in Sweden

Aleksandra Lazic, Roslagsvatten, Sweden

Two pre-studies of implementing sludge pyrolysis at two Swedish sites

Ida Sylwan and André Selander, RISE Research Institutes of Sweden, Sweden

Lessons learned: Integration of carbonisation technology at a wastewater treatment plant

Marcel Rensmann, Pyreg

09.50 The use of sludge biochars for micropollutant removal

Removal of pharmaceuticals and PFAS from wastewater by sludge based biochars

Kai Bester, Aarhus university, Denmark

10.10-10.30 Coffee break

10.30 Activation of sludge biochar and its use as adsorbent in wastewater treatment

Sini Reuna, Helsinki Region Environmental Services Authority (HSY), Finland

Sorbents production and phosphorus recovery from municipal sewage sludge by an integrated thermochemical process

Marta Di Bianca, RE-CORD, Italy

11.10 Market

Current status of sewage sludge biochar with CE marking

Dorottya Lőrincz, CerTrust, Hungary

Sewage sludge biochar in the scope of the EU Fertilising Product Regulation

Helmut Gerber, European Biochar Industries

Market for sludge biochar in Sweden

Martin Kylefors, VA SYD

Revaq sludge certification and the sludge char module

Anders Finnson, Svenskt Vatten, Sweden

12.30-13.20 Lunch



13.20 System analysis

A tool for system analysis in sewage sludge treatment including pyrolysis

Ida Sylwan, RISE Research Institutes of Sweden, Sweden

Latest Developments in the Helsinki Sludge Char Project

Linda Röman, Helsinki Region Environmental Services (HSY), Finland

14.10 Panel discussion and open floor

14.55 Wrap up

David Gustavsson, VA SYD/Sweden Water Research

15.00-16.00 Coffee and networking

STUDY VISIT THURSDAY 17 OCTOBER, 2024

Study visit to the sludge pyrolysis pilot at Ellinge Wastewater Treatment Plant

08.30 Bus leaves Malmö Central station

09.15 Visit to Ellinge pilot plant

11.15 Bus leaves Ellinge

12.00 Bus comes back to Malmö Central station