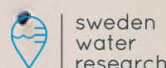


1st Swedish Conference on Sewage Sludge Biochar

11-12 OCTOBER / STUDIO MEETING POINT, MALMÖ / STUDY VISIT 13 OCTOBER

Programme and registration:



PROGRAMME OVERVIEW

October 11

Registration	08:30
Introduction	09:00
General about sewage sludge biochar	09:35
<i>Coffee break</i>	09:55
Technology presentations	10:15
<i>Lunch</i>	11:45
Pyrolysis	12:45
Pyrolysis – pilot- and full-scale	13:25
<i>Coffee break</i>	15:00
Biochar characteristics	15:20
Networking session I	16:55
End of day 1	18:00

October 12

Other biochar applications	08:25
<i>Coffee break</i>	10:05
Market	10:20
<i>Lunch</i>	12:00
System analysis	13:00
Panel discussion	14:00
Conclusions	14:45
Networking session II	15:00
End of day 2	16:00

October 13

Study visit Fårevejle WWTP	08:30
End of study visit	16:30

DETAILED PROGRAMME

October 11

Registration **08:30**

Introduction **09:00**

Welcome

Henrik Aspegren, CEO, Sweden Water Research, Sweden

Testbed Ellinge

David Gustavsson, VA SYD and Sweden Water Research, Sweden

General about sewage sludge biochar **09:35**

Sewage sludge biochar – challenges and opportunities

Christian Wurzer, University of Edinburgh, Great Britain

Coffee break **09:55**

Technology presentations **10:15**

Beston Group

Joyce Dou, China

AquaGreen

Henning Schmidt-Petersen, Denmark

EkoBalans

Gunnar Thelin, Sweden

Pyreg

Marcel Rensmann, Germany

Scanship

Pål Jahre Nilsen

WAI Environmental Solutions

Steinar Danielsen, Norway

Lunch **11:45**

Pyrolysis **12:45**

Pyrolysis of municipal sewage sludge - analysis of the biochar chemistry and heavy metal mobilisation

Naeimeh Vali, University of Borås, Sweden

System for integration of sludge anaerobic digestion and pyrolysis

Gudny Øyre Flatabø, Scanship/University of South-Eastern Norway, Norway

Pyrolysis – pilot- and full-scale **13:25**

Operational results from Denmark's first full scale sewage sludge steam drying and pyrolysis plant

Christian Wieth, AquaGreen, Denmark

The Helsinki sludge char project

Christoph Gareis, HSY, Finland

Pyrolysis opportunities for anaerobically digested sludge
Alex Wilcox Brooke, Asiantaeth Ynni Severn Wye Energy Agency, Great Britain
Pyrolysis of biosolids: a comparison of two different approaches
Maria Dittmann and Elke SELLERING, Eliquo Technologies, Germany

Coffee break **14:55**

Sludge biochar characteristics **15:20**

Characterisation of pyrochars derived from sewage sludge: stability and agronomic properties
Ruben Sakrabani, Cranfield University, Great Britain

Acid or base activation of sludge biochars to increase P availability
Clara Sophia Kopp, University of Copenhagen, Denmark

Investigating P speciation in sewage sludge biochars to better understand fertilizer value
Josephine Kooij, University of Southern Denmark, Denmark

Effect of pyrolysis conditions on sludge-char properties and its soil application with regard to legislation of the Czech Republic

Jaroslav Moško, University of Chemistry and Technology, Prague, Czech Republic

Performance of biochars from biosolids in fertilization and their climate impact
Helmut Gerber, Pyreg, Germany

Networking session I **16:55**

End of day 1 **18:00**

October 12

Other sludge biochar applications **08:25**

Production and utilisation of sewage sludge biochar for resource recovery and treatment of contaminants

Nazli Pelin Kocatürk Schumacher, Norwegian University of Life Sciences, Norway

The double win effect of pyrolysing PFAS-contaminated sludge: waste treatment and sorbent production.

Erlend Sørmo, Norges Geotekniske Institutt (NGI), Norway

Sludge derived char, complementary outlet as a heavy metal sorbent

Ida Sylwan, Mälardalen University, Sweden

Application of sewage sludge biochar in wastewater treatment

Christoph Thomsen, Flensburg University of Applied Sciences, Germany

Soil-less cultivation in CompoChar - a sludge biochar substrate

Nadav Ziv, Earth Biochar Ltd, Israel

Coffee break **10:05**

Market **10:20**

Interview: Some perspectives on the future of sludge biochar from the agricultural and food sectors

Claes Johansson, Lantmännen, Sweden

Constructing a market for sewage sludge products

Linus Ekman Burgman, Linköping University, Sweden

EBC-Certification of biochar made from biosolids

Hans-Peter Schmidt & Nikolas Hagemann, Carbon Standards International/Ithaka-Institute

Status and perspectives for biochar from sewage sludge and other input materials in the EU Fertilising Products Regulation 2019/1009 and in certain national regulations

Chris Thornton, European Sustainable Phosphorus Platform

Lunch **12:00**

System analysis **13:00**

Pyrolysis of sewage slurry for negative carbon emissions

Tong Han, KTH Royal Institute of Technology, Sweden

An LCA of sewage sludge management in a Swedish case study: high temperature pyrolysis vs. traditional sludge storage and spreading

Maja Karolina Rydgård, University of Copenhagen, Denmark

LCA of sludge biochar used in agriculture

Lisa Zakrisson, Swedish University of Agricultural Sciences, Sweden

Panel discussion **14:00**

The future for pyrolysis in sewage sludge handling and sludge biochar agricultural applications

Christian Wieth, AquaGreen; Gunnar Thelin, EkoBalans; Helmut Gerber, Pyreg; Pål Jahre Nilsen, Scanship and Steinar Danielsen, WAI Environmental Solutions

Conclusions **14:45**

David Gustavsson, VA SYD and Sweden Water Research, Sweden

Networking session II **15:00**

End of day 2 **16:00**

October 13

Study visit to Fårevejle Municipal Wastewater Treatment Plant in Denmark where a full-scale sewage sludge drying and pyrolysis plant was installed in 2022.

Bus leaves Malmö Central station	08:30
Visit to AquaGreen head office and pilot plant	10:00
Lunch on the bus to Fårevejle WWTP	12:00
Demonstration of drying and pyrolysis plant at Fårevejle WWTP	13:00
Bus leaves Fårevejle WWTP	14:45
Bus drops off people at Copenhagen airport	16:00
Bus comes back to Malmö Central station	16:30