

## Workshop on pharmaceuticals and organic chemicals in sewage biosolids: questions for recycling

Malmö (near Copenhagen) 27<sup>th</sup> October 8h00 – 12h00

in cooperation with the [Nordic Phosphorus Conference](#) 27<sup>th</sup> October (12h00) – 28<sup>th</sup> 13h30 - same venue:  
Quality Hotel View, Hyllie Stationstorg 29, Vaster, 215 32 Malmö, Sweden (15 mins. Copenhagen airport direct bus)  
Registration: 75 € / free for Nordic Phosphorus Conference participants

*Conference objectives: look at which pharmaceuticals and organic consumer chemicals are found in sewage biosolids - at what concentrations - effects of composting - anaerobic digestion - whether there is a risk to soil, crops, consumers health or the environment when treated biosolids are used in agriculture scientific risk assessments vs. public perceived concerns - how levels can be reduced and what further data and research is needed.*

8h00 Opening: DAKOTA and Svensktvatten

8h05 Chris Thornton, ESPP: Introduction to conference objectives: contaminants in sewage biosolids: a critical obstacle to the nutrient circular economy.

### From sewage works to farmland to crops

8h15 Andrii Butkovskiy, Wageningen University, The Netherlands: overview of organic contaminants (pharmaceuticals, hormones, consumer chemicals) in municipal sewage biosolids and approaches and treatments to decrease these.

8h30 Damià Barceló Culleres, ICRA Catalan Institute for Water Research / CSIC Spain: overview of levels of pharmaceuticals and organic consumer chemical contaminants in sewage biosolids in Spain

8h45 Ann Helén Österås, WSP Sweden: from biosolids to farmland (author of "Screening of organic pollutants in sewage sludge amended arable soils" [2015](#))

9h00 Jakob Magid, University of Copenhagen: 100 years' application of sewage biosolids and urban waste compost - data on heavy metals, soil biology, antibiotic resistance – potential for study of pharmaceuticals and organic contaminants.

9h15 Hannah Rigby, Imperial College London: work with UK Food Standards Agency on potential for transfer and uptake of organic contaminants to food from the use of biosolids and other recycled wastes as nutrient sources in agriculture

9h30 Questions to speakers – coffee available

### Does sludge treatment treat pharmaceuticals ?

10h00 Per Haugsted Petersen, Rambøll engineering Denmark: fate of pharmaceuticals and personal care chemicals in composting of biosolids

10h15 Jörgen Magnér, IVL Sweden: Investigation of different hygienization techniques capacity to degrade pharmaceuticals in sewage sludge ([2015](#)) and the fate of pharmaceuticals in soil fertilized with sludge. (report for Sweden EPA be published in 2016)

10h30 Kai Bester, Aarhus University, Denmark - removal of pharmaceuticals in different activated sludge wastewater treatment plants in comparison to biofilm and ozonation

10h45 Marilyne Soubrand & Magali Casellas, Limoges University France - impacts of sludge stabilization processes and sludge origin on the mobility of pharmaceuticals following sludge land-spreading

11h00 Questions to speakers

### Where do we go from here ?

11h00 Panel discussion on priorities for research, monitoring and regulation with representatives of the water industry, compost and biogas/anaerobic digestion sectors, regulators / EPA, pharmaceuticals industry

12h00 Nordic P Conference lunch (for Nordic P Conference registrants)

13h00 **Opening of Nordic P Conference** (same hotel venue)

Posters are welcome

Please email [info@phosphorusplatform.eu](mailto:info@phosphorusplatform.eu)