

Sewage sludge- EurEau position

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Chair of EurEau Waste Water Resources Working group

EurEau - Who we are



- EurEau is the Europeanfederation of water services
- We represent 32 national associations of drinking and waste water operators from 29 European countries
- We represent both public and private sector
- ~ With 470,000 direct jobs, we make a significant contribution to the European economy.



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Eureau - What we do



- ~ Our experts exchange knowledge
- ~ We establish positions
- ~ We engage with EU policy makers.



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Phosphorus in wastewater and sludge



- Major source for reuse, recycling and recovery
- Circular Economy and Nutrients



Sewage Sludge and Circular Economy



- UWWTD: some elements in principle
 - ~ Art. 14: Sludge arising from waste water treatment shall be reused whenever appropriate. Disposal routes shall minimize the adverse effects on the environment



Sewage Sludge Directive



~ SSD:

The aim of the Directive is "to regulate the use of sewage sludge in agriculture in such a way as to prevent harmful effects on soil,

vegetation, animals and man, while

encouraging its correct use."



~ EurEau continue to endorse this aim.

Important for policy making and recommendations



Independent RiskAssessments

The Norwegian Scientific Committee for Food Safety (VKM) has assessed the risk of using sewage sludge as fertiliser and soil conditioner.





VKM - Independent and transparent - I



- The Norwegian Scientific Committee for Food and Environment (VKM) carries out independent risk assessments for the Norwegian Food Safety Authority (Mattilsynet) and the Norwegian Environment Agency (Miljødirektoratet).
- The Scientific Panels comprise about 100 independent experts with broad interdisciplinary competencies.
- A risk assessment conducted by VKM is a review, summary, and objective assessment of scientific documentation available to determine the risk associated with a particular situation or action. Scientific results and data used in risk assessments are obtained from peer-reviewed articles and published documents, including risk assessments from national and international bodies, and from national and international surveillance and monitoring.

VKM - Independent and transparent - II



- The establishment of VKM is based on the principles for risk analysis as defined in Codex Alimentarius and in the European Union Food Law.
- Scientific assessment of health and environmental risks are separate and distinct from the risk management and the process is conducted in an open and transparent way.
- VKM has separate secretariat and budget. No Government body have any authority to influence or interfere in the scientific work of the committee.

Terms of reference I



VKM made a risk assessment of the following exposure routes after use of sewage sludge as risk assessment:

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Exposure	Target organism	Description
route nr		
	Plants	
1	Plants	Plants growing on soil where sewage sludge has been used
	Animals	
2	Soil organisms	Soil organisms living in soil where sewage sludge has been used
3	Aquatic organisms	Aquatic organisms living in rivers and lakes influenced by soil where sewage sludge has been used
4+5	Grazing animals	Animals eating grass and/or soil and soil organism from fields where sewage sludge has been used
6	Animals eating feed	Animals eating feed grown in fields where sewage sludge has been used
	Humans	
7	Children	Children eating soil
8	Humans eating plants	Humans eating plant products that have been grown on fields where sewage sludge has been used
9+10	Humans eating animal products	Humans eating products from grazing animals and/or products from animals eating feed grown in fields where sewage sludge has been used
11+12	Humans drinking water	Humans drinking surface- and/or groundwater influenced by soil where sewage sludge has been used

Terms of reference II



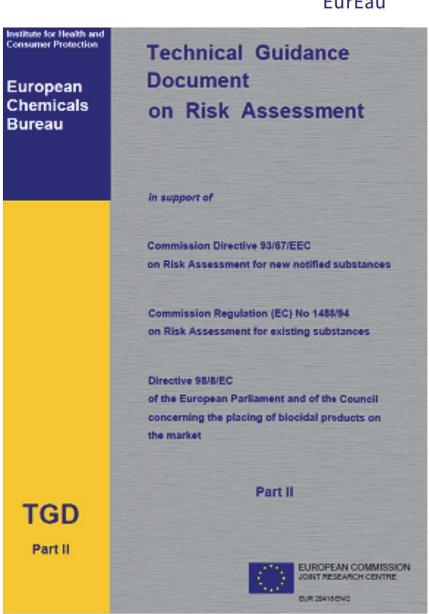
VKM assessed the following substances in sludge:

- ~ Metals: Cd, Pb, Hg, Cu, Ni, Cr, Zn
- Organic contaminants: phthalates, octylphenol, octylphenol toxylates, nonylphenol, nonylphenol-etoxylates, linear alkylbenzenesulfonate (LAS), PCBs, PAHs,
- ~ Pharmaceuticals: hormones, fluoroquinolones, tetracyclines

Methods



- Assessment based on available hazard characterizations (JECFA¹, EFSA², ECB³ etc) and compared with estimated exposure.
- Exposure modelling based on the TGD, but modified when relevant for Norwegian condition
- Human dietary exposure calculated based on Norwegian diets. Drinking water consumption of 2 I has been used
 - 1 Joint WHO/FAO Expert Committee on Fodd Additives and Contaminants
 - 2 European Food Safety Authority
 - 3 European Chemical Bureau



Conclusions from VKM



- VKM concludes that consumption of food grown in soil with added sewage sludge does not constitute any significant health risk caused by the contaminants assessed.
- ~ www.vkm.no

Source Control Measures



 The source control approach is key to delivering the circular economy

Micropollutants and the control at source approach



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Summary

Micropollutants can directly or indirectly enter the water cycle through many means. Once in the water cycle, they can pose a risk to drinking water resources and aquatic ecosystems.

Current technologies used in waste water treatment plants are not entirely capable of removing micropollutants.

The most sustainable and preferred solution is to prevent micropollutants – including microplastics - from entering the water cycle in the first place.

We call on the EU institutions to legislate according to the source control approach, the precautionary principle and the polluter pays principle.

EurEau believes that the correct use of the source control approach is instrumental to achieve a truly circular economy.

Microplastics – MPs – new study from Sweden



- WWTPs remove 99% of MPs, of which only 40% ends up in sludge
- MPs found in soils irrespective of sludge use
- Found no increase in MPs after 35 years field trials
 - giving 30% more sludge than normal (1 tDS/ha/year) compared to fields only treated with mineral fertiliser
- We are at the beginning of new knowledge - there are still uncertainties
- ~ http://www.svensktvatten.se/content assets/7be8e202754e4011a400bcff4e d89b1c/mikSVu-rap-8-13.pdf



Different situations in MS



- Sewage Sludge continues to engage
- ~ Circumstances vary regionally:
 - Excess of organic waste, inclandament
 - Agricultural produce
 - Climatic variations
 - Public perception
 - (Historical) Impact of heavy industries
 - Tradition for source control



Conclusions - I



- ~ Different situations in MS calling for different solutions
- Sludge to agriculture is safe and an important part of circular economy in many MS



Conclusions - II



- ~ We encourage ESPP and its members to:
- ~ continue to work together with the water industry - to ensure safe and sustainable management of wastewater resources, including energy, nitrogen, phosphorus and other nutrients!



Thank you for your attention

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