



Proposed amendment to the revised Urban Waste Water Treatment Directive

Article 20

<u>Article 20</u>	<u>Proposed amendment</u>
<u>Proposed text</u>	
<i>2. The Commission is empowered to adopt delegated acts in accordance with the procedure referred to in Article 27 to supplement this Directive by setting out the minimum reuse and recycling rates for phosphorus and nitrogen from sludge, in order to take into account available technologies for phosphorus and nitrogen recovery in sludge.”</i>	<i>“2. The Commission is empowered to adopt delegated acts in accordance with the procedure referred to in Article 27 to supplement this Directive by setting out the minimum reuse and recycling rates for phosphorus and nitrogen from sludge urban waste water treatment, in order to take into account available technologies for phosphorus and nitrogen recovery in sludge.”</i>

Justification

As written, this limits nutrient recovery to the sewage sludge, downstream of the waste water treatment plant itself. This is unnecessarily limiting and would exclude possible routes and technologies for nutrient recovery, such as:

- Struvite precipitation (or other phosphate salt recovery) in return streams within biological nutrient removal processes in wwtps
- Nitrogen recovery from NO_x / N₂O capture within the wwtp, e.g. as part of greenhouse emissions reductions, particularly in nitrification/denitrification processes
- Nutrient recovery by ion exchange, regenerative adsorbents, or chemical processes (e.g. Easymining LIFE RE-Fertilize) operated in nutrient rich streams within the wwtp
- Use of algae to treat or post-treat municipal wastewater and so to valorise nutrients into biomass products

Recovery of nutrients within the wwtp itself, rather than downstream from the sewage sludge, can offer advantages or reducing sludge production, improving wwtp performance, higher nutrient recovery rates, lower contaminant levels ...

To our knowledge, there is no technical justification for excluding nutrient recovery within the wwtp and limiting application to the downstream sewage sludge only.

Nitrogen entering the wwtp can be lost during as inert nitrogen (N₂) to air. The wording proposed does not prevent the Commission from fixing reuse and recycling rates applicable to nutrients entering the wwtp, to nutrients in downstream sewage sludge, or to other specific processes within the waste water treatment system.