

Unlock the potential of the sewage sludge directive through the full exploitation of the value in water for a green and sustainable Europe

Water Europe (WE) is the voice and promoter of water-related innovation and RTD in Europe. WE is a membership-based multi-stakeholder organisation representing over 200 members from academia, technology providers, water users, water service providers, civil society, and public authorities. WE activities and positions are guided by its Water Vision “The Value of Water: Towards a Future-Proof European Water-Smart Society”.

In its [Water Vision](#), WE has set out a blueprint for a society in which the true value of water is recognised and realised, and all available water sources are managed in such a way that water scarcity and pollution of water are avoided, water and resource loops are largely closed to foster a circular economy and optimal resource efficiency, while the water system is resilient against the impact of climate change events.

The [Sewage Sludge Directive](#) (SSD) has performed well in its objective to encourage the safe use of sludge, while complying with high environmental standards and providing beneficial side effects, such as improving effluent and water quality, soil organic matter and water retention. However, thirty years since its inception, new challenges have arisen that the Directive is not fit to address, namely contaminants of emerging concern, digitalisation and circular economy.

Water Europe welcomes the conclusion of the European Commission to update the SSD aligning it with the Green Deal and the digitalisation of Europe to address today’s challenges. A well-designed revised Directive must be cohesive and coherent with the EU’s current sustainability objectives, and particularly with the Circular Economy Action Plan, the Zero-Pollution, the Pharmaceutical and Farm2Fork strategies. Therefore, WE suggests a holistic management of sewage treatment that achieves the following objectives:

FULLY EXPLOIT THE VALUE IN WATER BEYOND AGRICULTURAL USE

This revision should consider a holistic approach of the reused sewage sludge. So far, the reuse of sludge has been focused on the agricultural sector and has not resulted in exploiting the full potential of these resources. Only 40% of the sewage sludge is recycled in agriculture.

We need to unlock the full potential opening up the markets for reused sewage sludge opportunities such as Biogas (e.g. thermal hydrolysis and anaerobic digestion¹), process industry, construction, etc., but also extracting the raw materials embedded in it. Reuse of sewage sludge contributes to the exploitation of the Value in Water.

Additional support to research & innovation should be encouraged towards affordable and feasible innovative solutions for resource recovery.

Lastly, some outdated aspects of risk management in the SSD hinder the full reuse of sludge, such as anaerobic digestion of mixed sludge which includes organic products.

We have the possibility to:

- ◆ Provide a source of additional income by having the possibility to produce green energy.
- ◆ Reduce the environmental footprint by reducing importation and supporting energy efficiency (reduction of CO₂ emission).
- ◆ Reinforce the European autonomy, particularly for by-product on the fertilizers' market. The EU target of 25% organic farms will need low carbon source of organics, N, P and K, it would be a circular opportunity to include domestic sources.
- ◆ Achieve European goals set in the European Circular Economy Action plan. It would also work in synergy with the EU's forthcoming climate legislation.

DIGITALISATION FOR EFFICIENCY AND FAST RESPONSE

Supporting the implementation of cost-effective digital technologies is key to address both the monitoring of contaminants and the transition towards a circular economy. Digital tools (e.g specialised sensors) can guarantee both health and environmental concerns and security, as spreading of sewage sludge from wastewater treatment plants only represents 1 to 2% of spreading on farmland.

UPDATE THE SSD ON SPECIFIC MEASURES TO ADDRESS CONTAMINANTS OF EMERGING CONCERN (CECs)

Specific measures and investment are needed to address CECs which were not considered when the SSD was drafted. It matters for our legacy contaminants for the future. Enforcing strict monitoring and filtering CECs would greatly improve the SSD's alignment with the Zero-Pollution Action Plan, Green Deal, Circular Economy Action Plan and Farm2Fork objectives. Investments in this endeavour are a key aspect for a fully functional circular economy, to eliminate health and environmental risks for European citizens.

¹ H2020 Project: <https://nextgenwater.eu/>

SMART MANAGEMENT OF THE SEWAGE SLUDGE

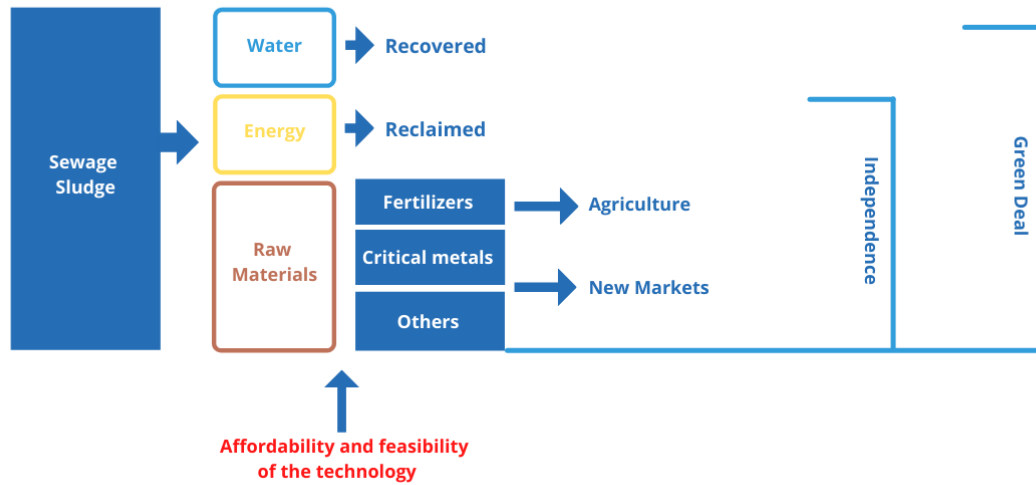


Figure explanations: Sewage sludge can be reclaimed into water and recovered into energy, but the raw materials embedded in it can also be extracted. Thanks to affordable and feasible technologies, these raw materials can, for example, be used as fertilizer in agriculture or as critical metals in new markets.