

**EUROPEAN POLICY ROADMAP**

**Sewage contains valuable substances that can be used circularly as a raw material for biobased products. However, this potential is currently underused. In the European Interreg project WOW! wanted to change this by demonstrating that it is technically feasible to extract raw materials from sewage, by showing that there is a market these materials and by addressing legal barriers for the market uptake. This factsheet summarizes a European roadmap towards the widespread use of the potential that raw materials from sewage offer.**

**THE POTENTIAL OF RAW MATERIALS FROM SEWAGE**

WOW! has shown that the recovery of carbon-based elements from sewage results in valuable products such as biodiesel, biochar and PHA. These products can replace products that are currently made from natural resources (oil, coal). This contributes to a more circular economy in the EU. Many applications are possible as shown in the table below.

**THE EU SET HIGH AMBITIONS TO BECOME CIRCULAR**

The EU Green Deal, the future climate law and the EU circular action plan all reflect the high ambitions to reduce our amounts of waste and greenhouse gas emissions to a minimum. Article 12.1 of the European waste-water treatment directive UWWTD (91/271/EEC) states that treated wastewater shall be reused whenever appropriate. Disposal routes shall minimize the adverse effects on the environment. This also applies for sludge arising from wastewater treatment according to article 14.1-18.

**WHAT HOLDS US BACK?**

Currently the re-use of sewage and sludge arising from wastewater treatment is only very limited and a free option to choose for water utilities. There are barriers that hold back the transition towards a circular water economy. In the opinion of the WOW! consortium the main legal barrier is the unclarity and multi-interpretability of the European rules on end of waste. This leads to different national frameworks and sometimes overprotective procedures.

**A ROADMAP TOWARDS THE CIRCULAR USE OF RAW MATERIALS FROM SEWAGE**

To realize efficient use of resources and accelerate the transition towards a modern and more sustainable Europe, innovations are needed. This requires European clarity of and more uniformity in the legal framework. The WOW! consortium foresees 5 important steps towards this goal:

**The European legal roadmap**



**Explanation**

- 1: it is a necessity to combine the current review with making the recovery and reuse of resources from sewage more attractive.
- 2: Reducing market barriers includes: Free trading of resources and products from sewage with and end-of-waste status within the EU. A revision of the burden of proof that there is a market or demand for a material.
- 3. Collection, recycling and use of recovered raw materials from sewage should be considered the standard on no longer a possible free option to choose.
- 4. Waste valorisation is the key. Change the definition of "waste" in a way that doesn't automatically imply all materials are classified as waste after being used once.
- 5. This includes a transparent end-of-waste process with clear (end-of-waste) status demands and deadlines.

[> go to European Policy Roadmap](#)

Lipids	Biochar	Bio-oil	Acetic Acid	PHA
Fuel	Adsorption of pharmaceuticals in STP	Heat Electricity Fuel blending	Carbon source STP pesticide	Packaging Agriculture Construction