



RAW MATERIALS FROM SEWAGE - LEGISLATION

GERMANY CIRCULAR

Reuse of sewage is an objective in the Municipal Waste Water Directive (Kommunalabwasserrichtlinie). Furthermore the recovery of resources is determined in the "Kreislaufwirtschaftsgesetz" (German implementation of the European waste Framework Directive 2008/98/EG). One of the main tasks is to generate as little waste as possible and to recycle as much of it as possible.

SEWAGE IS VALUABLE

A biocomposite made from recycled toilet paper? Yes you can! Raw materials in sewage can be used for all kinds of applications. A few examples:

- Application of phosphate as a fertilizer.
- Sewage sludge to produce biogas or as a raw material for the cement industry.
- Use of lipids for biodiesel production.
- Activated carbon made from screenings for the removal of micro pollutants from sewage.
- Making degradable plastics (PHA) from fatty acids.

LEGAL FRAMEWORK

Municipalities and water associations treat sewage under public law. There are no clear policies on resource recovery from sewage except for phosphorous. However, secondary material obtained from wastewater might be considered as product. The EoW status is determined by the manufacturer of the raw material according to the 5 criteria in the European waste Framework Directive. The EoW status is not checked by a governmental institution. The manufacturer is responsible for the product.

For secondary raw materials from wastewater with a quantity of more than one tonne per year each, the European REACH regulation must always be observed for production and marketing.

German municipal sewage treatment plants are almost completely operated under public law. The public operators are exempt from turnover tax and are not allowed to act in the private sector. As a result, they can not merchandise materials and resources recovered from sewage. This needs to be done by a third party such as a 100% public owned daughter company.



Bio char



Bio oil



Bioplastic

TOP 5 PRACTICAL CHALLENGES

One of the main challenges of making valuable products from sewage is uncertainty about the legal implications.

1. Uncertainties about the legal implications for the recovery of valuable resources from sewage must be eliminated. The status of products from sewage water is unclear: is it considered as a secondary product or a waste.
2. Initiators of resource recovery do not know to which governmental institution their case has to be directed.
3. Besides phosphate recovery, there are no concrete goals on resource recovery from sewage but only ambitions. As a result there is no direct necessity to realise resource recovery in the short term.
4. To prove demand for the material a Memorandum of Understanding with a market party has to be signed. However, these companies only enter into an agreement if there is certainty that the EoW status is achieved and there is a market for the product.
5. There is no generic European or German end of waste regulation for resources from sewage. So far the criteria have been laid down for e.g. iron scrap, glass cullet and copper scrap. A specific EoW status needs to be requested for each application, each client and each production site. This is expensive, time-consuming and also hinders market uptake.

MORE INFORMATION

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 Or visit the website www.nweurope.eu/wow.

WHICH ACTIONS ARE NEEDED!

SHORT TERM (< 1 YEAR)

1. Make an unambiguous (EU) assessment framework for raw materials from sewage. This position needs to be validated with a case study in cooperation with the Ministry of the Environment.
2. One door, one key principle: one governmental institution that handles requests.
3. Development of operator models for recovery of raw material from sewage for public owned companies.

MEDIUM TERM (1-3 YEAR)

1. Formulation of concrete goals on resource recovery from sewage to stimulate resource recovery in the nearer future.
2. Expand the options for agreeing to an end-of-waste status of the same type of raw materials for different locations and different buyers.
3. Lobby for free trading of raw materials between countries: an EoW status applies for all EU countries.