



RAW MATERIALS FROM SEWAGE - LEGISLATION

THE NETHERLANDS CIRCULAR

The exploitation of resources from sewage contributes to the national policy "The Netherlands circular in 2020".

The ambition is limited by waste regulation and policies that lag behind and remain based on the linear principle that waste is the end of the chain.

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

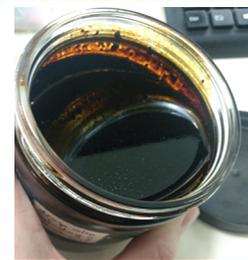
Raw materials from sewage are classified as waste materials. A substance only ceases to be waste if the following conditions from the framework directive (Kra art. 6, update 2018/851/EU) are met:

- The material is to be used for specific purposes.
- There is a market or demand for the material.
- The material meets technical requirements for the specific purposes and meets the existing legislation and standards applicable to products.
- The use of the material generally has no overall adverse effects on the environment or human health.

The Guideline Waste or Product (Ministry of I&W, July 2018) is the framework for these conditions. Authorities are explicitly asked to follow this Guideline for the sake of the transition to a circular economy.



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. Depending on the question, an End of Waste (EoW) file is reviewed nationally (by the Ministry) or regionally (by the "Omgevingsdiensten"). Struvite was reviewed on a national level and Kaumera on a regional level.
2. The Guideline Waste or Product is open to interpretation and that makes the approval of an EoW file dependent on persons and region. In practice, the regional office often consults another authority (RWS, NVWA).
3. There is no set term for the procedure, which makes it impossible for initiators to plan. The review of the struvite file has taken seven years and for Kaumera and cellulose the procedures are ongoing.
4. To prove demand for the material an agreement with a market party has to be signed. Market parties only enter into an agreement if there is certainty that EoW status has been achieved and is available.
5. There is no generic European or Dutch end of waste regulation for resources from sewage. 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 (see 4).

MORE INFORMATION

For more information please contact Jappe de Best, Centre of Expertise Biobased Economy/Avans Hogeschool - jh.debest@avans.nl.

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

WHICH ACTIONS ARE NEEDED!

SHORT TERM (< 1 YEAR)

1. Have a maximum term of 30 days for the assessment of end of waste files
2. Also allow a letter of intent as burden of proof that there is a market or demand
3. Create a clear substantive assessment framework for raw materials from sewage. On the basis of this framework, determine in advance with the competent authority which requirements the EoW file must meet (per case).

MEDIUM TERM (1-3 YEAR)

1. Authorise one nationally operating organisation to assess end of waste files.
2. Expand the options for agreeing to an end of waste status of the same type of raw materials for different locations and different customers.
3. Lobby for free trading of raw materials between countries: an EoW status applies for all EU countries.