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Welcome!

Interreg North-West Europe WOW!
European Regional Development Fund

- Introduction of the chair for this debate

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Programme

14:00h	Welcome by Mark Fletcher, Global Water leader at ARUP
14:05h	Pitch of the WOW! project by Jappe de Best, Avans - Centre of Expertise Biobased Economy
14:10h	Raw materials from sewage; examples from daily practice from producer's and technology supplier perspective by Coos Wessels, CirTec
14:25h	A call for action by Katrien Bijl, Waterboard Vallei Veluwe
14:30h	Panel debate - how to reach a uniform legal framework for the circular use of raw materials from sewage? guided by Mark Fletcher
15:20h	Conclusions and follow up
15:30h	End of the meeting

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The WOW! project

Legal framework

Jappe de Best PhD MSc
Professor Biobased Resources & Energy

Avans University of Applied Science
Centre of Expertise Biobased Econom

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Wow! goals

- We aim to start a transition towards a circular approach in sewage treatment
- For this purpose we want to:

SHOW THAT IT IS TECHNICALLY POSSIBLE TO RECOVER RAW MATERIALS FROM SEWAGE.

LET MARKET PARTIES BECOME ACQUAINTED WITH THE POTENTIAL OF RAW MATERIALS FROM SEWAGE (PHA, BIODIESEL, BIO-OIL, BIOCHAR, ACETIC ACID).

CREATE A EUROPEAN FRAMEWORK FOR THE STEPS THAT NEED TO BE FOLLOWED FROM WASTE TO RAW MATERIAL.

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Towards a European framework …

- Current policy landscape
- EU best practices resource recovery
- National calls for action
- EU roadmap

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Current policy landscape

- Inventory of applicable legislation
- For complete value chain: from sewage to product
- Belgium, France, Germany, Luxemburg, Netherlands, United Kingdom

Main conclusions

- Despite excessive EU legislation there is still significant amount of flexibility for member states / regions
- Interpretation of key definitions is left to member states and are often based on case-by-case analysis (e.g. end-of-waste status)

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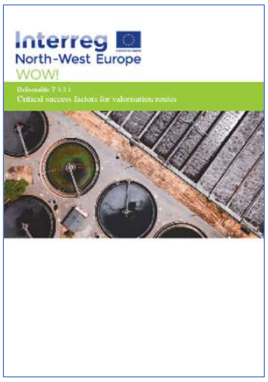
EU best practices resource recovery

- Overview of critical success factors for the recovery of raw materials from sewage and bringing these resources to the market
- Based on lessons learnt in EU subsidy projects

Main conclusions

- Two important **drivers** can be distinguished:
  1. Acceptance of raw materials from sewage
  2. Policies related to use of products from sewage
- It is difficult to distinguish generic **critical success factors** but projects tend to be more successful if:
  i. there is regular consultation with regional and national authorities
  ii. a project is not afraid to take a next step in (legal) acceptance of a product if not all signs are green yet



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National calls for action

- Sketch of legal context of resource recovery from sewage
- Main legal challenges of making valuable products from sewage
- Short and medium term actions to overcome these challenges

Common denominators

- Create a clear substantive assessment framework for raw materials from sewage.
- Expand the options for agreeing to an end-of waste-status of the same type of raw materials for different locations and different customers
- Free trading of raw materials between countries: an EoW status applies for all EU countries

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Questions?

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Raw materials from sewage
Daily practice from producer's and technology supplier perspective

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Coos Wessels

Director of CirTec BV

CirTec Cellvation

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Our focus: Recovery and valorisation of cellulose from sewage

Sustainable paperwork!

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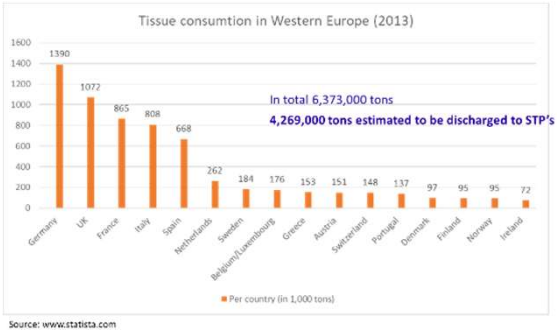
Have you ever thought about it?

- Where does all that toilet paper go?
- Is it worth recycling?
- If so; What can you do with it?



Source: www.statista.com

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What is the added value?

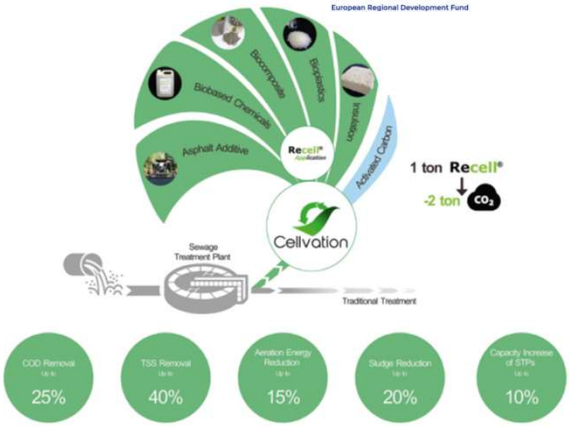
- Reduction of energy requirement (15 to 20%);
- Less sludge (20%) = less sludge dewatering;
- Reduction of chemical use (approx. 20%);
- Lower maintenance costs;
- a marketable recovered raw material;

- Reduction of the CO_2 footprint


Additive asphalt


Blown-in Insolation flocs


Bio-composite granulate



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The chicken and the egg

Water authority or customer?

- The primary objective of a water authority is to purify sewage and that of the customer to produce a high-quality product (at acceptable cost);
- Both have a sustainability objective ;
- The water authority can only recover raw materials in a responsible way if there is a market and a customer can only use recovered raw materials if there is secured supply (of a certain quality);
- New technology may not have any negative effects on the sewage treatment process

End-of-waste

- Can only be applied if there is demonstrably a market;
- In order to open a market, a recovered resource must have a demonstrable quality;
- In principle, in order to be able to use a recovered product, it must have an end-of-waste status.

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What did the route look like for us!

Various water boards were willing to contribute to pilot research (based on possible potential and/or social and environmental objectives)

Interested users invested in possibilities applications

With subsidy and support from a water authority, we realized a small-scale cellulose production plant;

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Now we have a marketable resource and a market, but ….

still a long way to go!

- A recovered material from sewage is considered a waste material;
- a user of the recovered material must therefore have a permit to process waste;
- Transport of the raw material is subject to the rules for waste transport;

- An end-of-waste status is therefore a necessity;
- In different countries to be able to work cross border and to create sufficient market volume.

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The end-of-waste procedure

- Cellulose has many different applications, many of which offer an interesting sales channel;
- For each individual product, an end-of-waste status must be applied for - Which also means that for each individual product it must be demonstrated that there is a market for it;
- Long-term processes and high costs for different procedures;
- There is no clear guideline for demonstrating the end of waste status
- 4 years to complete the application. Current application (applied in 2018) gives an indicative decision, but no certainty.
- Results from one country are not direct accepted in other EU-countries;

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My remarks!

I. The change to a more circular society is not just about the environment, but offers new possibilities;

II. The struggle in which policymakers, technology developers, users and others can only be resolved with mutual understanding and positive thinking;

III. But we must act fast.
   - ✓ The environment does not allow us to wait (too) long;
   - ✓ Technological advantage has enormous economic value.

I. No new, but clear regulations;
   - ✓ For example: set a maximum response time within which an application must be assessed with reasons;

II. Make resource recovery attractive and encourage utilisation of recovered resources (use incentives);

III. Enable cross-border use of recovered materials (one approved end-of-waste application must be sufficient for free trade in the EU.

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Thank you!

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"We cannot solve our problems with the same thinking we used when we created them"

- Albert Einstein -

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Call for action!

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Katrien Bijl
Projectmanager WOW!

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Panel debate

Luxembourg:
Robert SCHMIT

UK:
Dr Heather Smith

The Netherlands:
Dieter Staat

Flanders: Ir. Dirk Halet

Germany:
Dr. Ewa Harlacz

Moderator:
Mark Fletcher

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Question 1

The big dream: what opportunities are offered when there is one clear legal framework?

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Question 2

What inhibits us to reach this goal?

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Question 3

What could be the role of national policy makers towards a uniform clear legal framework?

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Question 4

Please fill in which year: "I believe that Europe will be circular in……..

Why?

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Question 5

What is the first step to be taken tomorrow?

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Question 6

What is the burning question I should have asked?

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Back to WOW!

Has your call for action been heard?

What is the WOW! project team going to do with the outcome of this debate?

What will the WOW! team do when the big dream is reality?

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