

To Europe Direct Contact Center - the reference number 370277.
Additional information on what exactly is our project,
and what information we are seeking.

2022-07-18

PROJECT: SBRS concept stands for "Sustainable Biological Recycling System".

Project SBRS concept is about taking advantage of bioenergy and the vital chemical elements found in food and toilet waste mixed with plant waste in a sustainable way in local high-tech biogas plants. Greywater from households will be treated in local biological plants and reused locally.

The SBRS concept will be used in all districts in the cities, in all villages and in companies that have large amounts of Renewable Organic Material, i.e. material that originates in photosynthesis and occurs in residues and waste. Resilient local communities with good cohesion increase people's well-being will be created.

The SBRS concept will make it possible for residents to gain insight into all methods used to minimize emissions and maximize the production of biogas and biofertilizer, as well as to be able to make suggestions for improvements.

To investigate all functions in the SBRS concept, the following need to be developed, built, and tested:

- Hygienic and easy-to-handle collection devices for food and toilet waste that encloses material in foil of starch.
- Digitized logistics for increased resource management and customized transport.
- Local high-tech biogas plants that use Optimum Solids Anaerobic Digestion where the dry matter content is about 30% or more that is adapted to the needs of microorganisms.
- Local facilities for biological treatment of greywater to increase protection of water.

Sustainability of the SBRS concept

Ecologically sustainable - protect water from pollution and overexploitation, utilize bioenergy, radically reduce the negative impact on biodiversity and emissions to air that occurs in sewage systems, in composting and in all thermal and chemical processes that handle Renewable Organic Materials in waste.

Economically sustainable - with the help of biological conversion methods, ***the total costs*** that residents must pay directly and indirectly, when current methods and systems have a negative impact on the environment, health, and climate, ***will be reduced***.

Socially sustainable - all employees can work in a hygienic work environment without being exposed to bioaerosols and hazardous chemicals.

The SBRS concept combines

- long-term sustainable use of renewable organic material in waste for local production of renewable electricity, heating, cooling and domestic biofertilizer
- reduced transport and environmental pollution that reduces ecological footprints
- a high potential for creating decent local jobs
- vitalization of all territories and thus increased resilience and cohesion in the urban districts and villages
- reduced bills for households.

More is explained in the invitation to collaboration: <http://biotransform.eu/wp-content/uploads/2022/07/SBRS-concept-is-looking-for-partners-for-collaboration-20220707-RS-BS.pdf>.

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Information we need: **Three questions to those responsible for EU legislation** in connection with the EU's development towards a knowledge-based sustainable society:

1) Is it in accordance with EU legislation that the SBRS concept in local high-tech biogas plants uses human faeces and toilet paper that has been hygienically collected and enclosed in starch foil as a raw material to produce biogas and biofertilizer?

Or does the legislation need to be adapted to ecological, economic, and social more sustainable methods and systems instead of supporting present unsustainable methods and system described below?

The **sewage sludge** that goes to biogas plants contains residues of food and toilet waste that have been flushed down and then treated with energy-rich methods and dangerous chemicals. There is much less organic carbon left in sewage sludge, only about 15% of nitrogen and the amount of phosphorus is not reported. Is this a sustainable system?

Current situation

Human excrement and toilet paper and about a third of food waste (the latter according to estimates in Sweden) are flushed with drinking water and mixed in the sewer with other wastewater containing various chemicals. In sewage treatment plants, most of the nitrogen and organic carbon is sent to the air and phosphorus is bound by chemicals. Some nitrogen, phosphorus, and organic carbon flow with outgoing water to watercourses and the sea.

For example, in Malmö from just over 340,000 inhabitants, **481 tonnes of nitrogen and 12 tonnes of phosphorus are sent to the sea every year**. There is no account of how much organic carbon get to the sea and has been emitted as carbon dioxide when Renewable Organic Material is reduced.

Vienna's wastewater treatment plant (1.9 million inhabitants) presents the following: Removed substances **2021 (in tonnes): a) 33,097 organic carbon (C org)**. That means emissions of 121,465 tonnes of carbon dioxide (CO₂). **b) 8,759 total nitrogen (N)**. How much becomes nitrogen (N₂) and how much nitrous oxide (N₂O)? **c) 1541 total phosphorus**. All of these are very costly annual losses! Emissions to air create an unhygienic environment for all citizens who pay for unsustainable treatment.

2) Is "green transition" the same as "sustainable transition"?

At a conference on circular economy in the North Sea region on 21 June 2022 in Helsingborg, a representative from the Interreg North Sea Region stated that there are two lines. Could it mean the risk of "**green wash**" as in the example below?

During the conference, an example "Reco Lab" in Helsingborg was highlighted, which is described as a "world-unique project with three pipes". In a newly built area, food and toilet waste is flushed from households with drinking water in two separate pipes and treated with chemicals to recycle nitrogen and phosphorus. The third pipe is for grey water from baths, dishes, and laundry.

Can "Reco Lab" be considered a sustainable system when drinking water is polluted, hazardous chemicals are used, the working environment is unhealthy, and the price of

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recovered nitrogen and phosphorus cannot be estimated but becomes very high? Residents will bear costs for the process. It is already written that the cost of building a system with three pipes will be 25% higher than for the conventional system.
Should decision-makers be held accountable for misuse of public funds when a more sustainable proposal in an innovation competition in 2014 before project start was rejected?

- 3) When will the EU establish "**scientifically based definitions**" of terms that are currently simplified due to the influence of organizations that help companies with misleading definitions use unsustainable methods that negatively affect the environment, health, economy, and climate? **Where is the basic knowledge in biology?** Two examples of appalling definitions - below the level of high school education:

“**Bioenergy** is the conversion of biomass - such as agricultural and forestry by-products and residues, organic municipal waste, energy crops, algae, biological CO₂ - into usable energy carriers including heat, electricity, and transport fuels.”

https://ec.europa.eu/info/research-and-innovation/research-area/energy-research-and-innovation/bioenergy_en

At the same time on the same page the following is stated:

“**Bioenergy is the most important source of renewable energy in the EU**, with a share of almost 60%. The EU has a leading position in bioenergy technology, but its distribution is still limited.”

This should lead to the EU urgently investing in innovation that uses Renewable Organic Materials originating in plants, animals, and microorganisms - all of which are based on today's photosynthesis - in an economically, ecologically and socially sustainable way to protect the environment, health and reduce negative impact on the climate.

“**Biomass** is derived from organic material such as trees, plants, and agricultural and urban waste.

It can be used for heating, electricity generation, and transport fuels. Increasing the use of biomass in the EU can help diversify Europe's energy supply, create growth and jobs, and lower greenhouse gas emissions. It is also needed in the electricity production to balance variable renewables.”

https://energy.ec.europa.eu/topics/renewable-energy/bioenergy/biomass_en

However, very well on the same page is stated the following: "**Biomass for energy must be produced, processed and used in a sustainable and efficient way in order to optimize greenhouse gas savings and maintain ecosystem services.**"

This means that biological transformation processes must be emphasized, and others gradually phased out.