

Protect water - do not shit in water

Water is an important food. It is highly inappropriate to use water as a means of transport for waste and then treat it in wastewater treatment plants with energy-intensive methods and chemicals that are hazardous to health, the environment and economy.

Rural areas supply settlements with vital elements and bioenergy in food. Unfortunately, less than 2% of plant nutrients go back to crops according to Ellen MacArthur Foundation in the report CITIES AND CIRCULAR ECONOMY FOR FOOD, published in May 2019. The report emphasizes the importance of utilizing plant nutrients from all types of renewable organic material, including the excrement of animals, humans, and insects. The report describes the benefits of 'Regenerative Agriculture'.

The city must protect water and return all elements including a part of bioenergy in biofertilizer to maintain soil fertility. The transition to a circular bioeconomy can be described with examples that apply to Malmö.

Instead of building a sewage tunnel for SEK 2.1 billion for 7 years, which will deal with wastewater from 300,000 inhabitants in an unsustainable way, the SBRS concept (Sustainable Biological Recycling System) should be used. Gradually, 100 local high-tech biogas plants can be built that are connected to modern digitized logistics. Gray water from households will be biologically treated in 100 local biological treatment plants. Purified water can be used for irrigation of urban plantations, green areas and used for water play, etc. The water stays in the city and is useful compared to the current system that empties the city of water.

Switching to SBRS benefits

- health - emissions are minimized, hygienic work environment is achieved
- environment - use of environmentally damaging chemicals and fossil energy sources is being phased out
- economy - radically reduced costs for ill health, environmentally damaging chemicals and fossil energy sources.

Food and toilet waste are collected hygienically with the help of collection devices and processed in local high-tech biogas plants for about 3,000 inhabitants. It is mixed with plant waste to adapt to optimal water content for microorganisms. An estimated 6 tonnes / day of renewable organic material will be collected and converted into biogas and biofertilizer.

From 300,000 inhabitants, at least 220 GWh / year will be in the biogas that can be converted into electricity (approx. 30%) and heat (approx. 65%) which can be converted to cold during hot days. It is estimated that between 200 and 300 GWh of energy per year remains in biofertilizer. Bioenergy is bound in organic carbon compounds and in microorganisms which increase biological diversity in the soil. Biofertilizer positively affects soil fertility and creates carbon sequestration. This means that organic carbon is bound, which corresponds to between 33,000 and 49,000 tonnes of CO₂ / year.

Facts Malmö sewer tunnel (Press release 2018-10-19) Technical solution: Drilled in the same way as the City Tunnel, 20 to 30 meters deep. The wastewater must flow from its own weight to the Sjölanda wastewater treatment plant. Estimated construction time: A total of 7 years. The project is proposed to start in 2026 so as not to clash with investments that need to be prioritized for the new sewage treatment plant in Sjölanda.

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