SEMiLLA

Sanitary wastewater treatment units, converting wastewater into clean water and fertilizers for food production. The solution is currently used for festivals and cultural events.

NETHERLANDS, Doetinchem

Water treatment & agriculture

2017

Recycling, raising public awareness

CONTEXT

- + 2 billion people do not have access to clean water at home
- 40% of the world's population will face water shortages by 2050.
- 80% of wastewater generated by human activity is returned to ecosystems without being treated or reused

SOLUTION

SEMiLLA Sanitation uses space technologies from the MELiSSA research programme to develop close loop sanitation facilities. SEMiLLA created mobile wastewater recovery and treatment systems, which use biological and filtration processes to transform urine, grey waters and black waters into clean water and nutrients:

👉 Yellow water (urine) → 90% clean water + 10% fertilizer to grow plants

👉 Black water → compost + irrigation water + fertilizer

👉 Grey water → flushing water

OBJECTIVE

Currently tested in several festivals and cultural events in Europe, Peter Scheer's (founder) aim is to use this technology for :

👉building applications in order to make waterneutral and sewageless buildings

👉humanitarian purposes, particularly in refugee camps where hygiene and resource autonomy are paramount. Locals will be trained to ensure the use and maintenance.

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