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Agrosistemi s.r.l. · SYNGEN SRL · UNIVERSITÀ DI PAVIA · GOBIERNO DE ESPAÑA MINISTERIO DE CIENCIA E INNOVACIÓN · CSIC · GRUPPO CAP · MONDO PULITO

life freedom

EXPECTED IMPACTS

- The production of **waste sewage sludge** (European waste code ERC 190805) will be **eliminated**.
- **Sludge transport** from the purifier to the disposal site will be **avoided** (Carbon food print reduced).
- In place of sludge disposal, the **purifier could potentially produce 380 tons of bio-oil and tar** to be used in bituminous **conglomerates to produce road surfaces** (around 9,500 m²/year).
- By using the bio-oil as fuel for **thermal use** it could be possible to obtain about **3800 MWth**.
- The solid residue of the process will offer **250 tons of mineral** fraction to produce **novel binders**.

OBJECTIVES & SCOPE

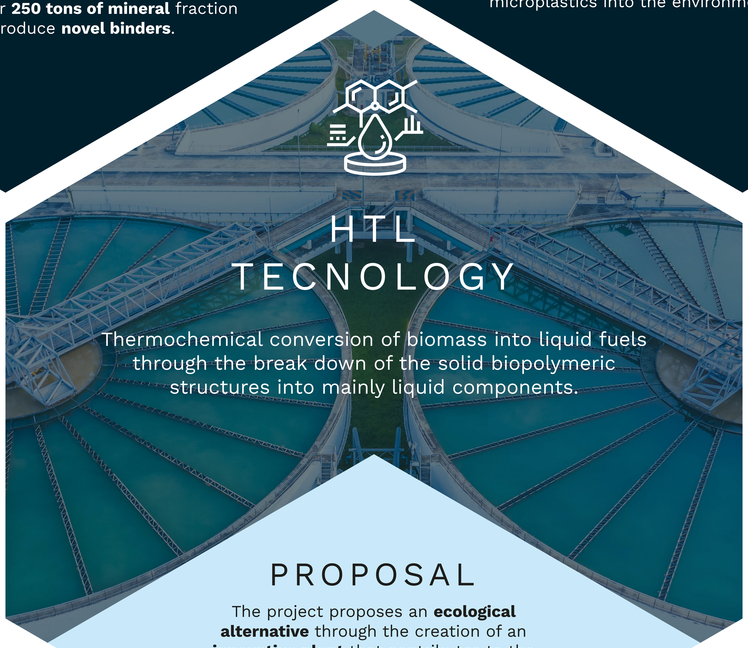
To eliminate the production of sewage sludge waste.

To demonstrate the feasibility of a new waste management system.

To demonstrate the effectiveness of hydrothermal liquefaction technology for the treatment of sewage sludge.

To recover the organic matter contained in the sewage sludge **and transform** it into liquid hydrocarbons and solid bituminous residue.

To avoid the re-introduction of heavy metals, organic pollutants and microplastics into the environment.



HTL TECNOLOGY

Thermochemical conversion of biomass into liquid fuels through the break down of the solid biopolymeric structures into mainly liquid components.

PROPOSAL

The project proposes an **ecological alternative** through the creation of an **innovative plant** that contributes to the development of the state of the art in the economically sustainable **recovery of sewage sludge waste**.

KEY ACTIONS

1. **DESIGN** AND **CONSTRUCTION** OF THE DEMONSTRATION **PLANT**
2. FUNCTIONAL **TEST** OF THE SYSTEM
3. **VALORISATION** OF THE **PRODUCTS** OBTAINED
4. MONITORING OF **ENVIRONMENTAL** AND **SOCIO-ECONOMIC ASPECTS** OF THE PROJECT
5. **DISSEMINATION, COMMUNICATION** AND **REPLICABILITY**

PROJECT COORDINATOR
info@agrosistemi.it - www.agrosistemi.it

WWW.LIFE-FREEDOM-PROJECT.EU
info@life-freedom-project.eu