



# FROM WASTE TO VALUE

A holistic solution for producing tailor-made biochar from woody waste, that encompasses smart and sustainable practices in manure application, leading to air quality improvement and bioeconomy growth.

## » CHALLENGES

1. Collection and post-processing of municipal woody waste, vastly contributes to greenhouse gas (GHGs) emissions such as:
  - › carbon dioxide (CO<sub>2</sub>)
  - › methane (CH<sub>4</sub>)
  - › nitrous oxide (N<sub>2</sub>O)
2. **Implementation** of key **agricultural activities** that poorly affect **air quality** in the surrounding areas (odor nuisance and pollution) and **global warming** due to the emission of VOCs (methane CH<sub>4</sub> and Nitrous Oxide N<sub>2</sub>O). These activities include handling and storage of cattle manure in farms.

## » OBJECTIVES & ACTIVITIES

The project aims to address key environmental challenges in the agroecosystem of Cyprus by implementing a series of technical and scientific activities. These include the conversion of woody waste into biochar, a sustainable technological solution, for reducing volatile organic compounds in cattle manure operations.

### THE RE-GREENVOCS BIOCHAR CAN ULTIMATELY BE USED FOR:

- › Mitigating VOC emissions (air quality improvement) by mixing it with cattle manure
- › Enhancing soil fertility (optimize soil health) by mixing it with agriculture manure for optimizing farm cultivation

Further to the above, the project aims to assess current management practices by municipalities for woody waste and propose improvements towards sustainability. In addition, the project introduces Internet of Things (IoT) technologies such as smart sensors that will enable the real-time collection and monitoring of air quality and soil fertility data towards evaluating the project impact.

The project is fully compatible with the «Green Transition» Thematic Priority and in particular with the targets of the REPowerEU Plan – «Affordable, secure and sustainable energy for Europe».



[www.cyric.eu/project/re-greenvocs](http://www.cyric.eu/project/re-greenvocs)

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