

## **FROM UCO TO BIODIESEL**

#### **MUNICIPALITY OF RETHYMNO, CRETE**

The scope of this action is to develop the conditions in which a local UCO-to-biodiesel supply chain will function successfully in favour of the Municipality of Rethymno providing multiple benefits both environmental and financial.

The main activities/ tasks to be performed involve:

- Set up and operate a small unit for biodiesel production, including small-scale investments and procurement of appropriate equipment
- Expansion of the UCO collection network, including restaurants/hotels. Procurement and placement of UCO collection tanks with sensors to improve safety, monitoring and maintenance of the collection system. Containers will be also located in small rural communities at the edge of the municipality area.
- Educational and awareness campaign in cooperation with local school communities and active citizens associations to drive behavioural change for proper UCO disposal / recycling. Production of promotional materials and technical guides.
- In policy level, activities to improve the legislative framework that at the moment has limitations to small scale biodiesel production
- Quality control on the raw material (UCO) and biodiesel produced
- Demonstration project where biodiesel produced is used in 1-2 vehicles of the municipal fleet to test in real conditions and measure economic and environmental benefits.
- Study on the establishment of a local cooperative for local UCO collection, transformation and exploitation.

The end result will be a well-functioning and sustainable local energy production chain with the provision to establish a local energy business model in the form of a local cooperative. An extended and efficient UCO collection system will be in place and citizens will be informed about UCO recycling benefits and UCO collection containers locations.



TECHNICAL UNIVERSITY OF CRETE (TUC) SCHOOL OF ENVIRONMENTAL ENGINEERING RENEWABLE AND SUSTAINABLE ENERGY SYSTEMS LABORATORY



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#### Macro objective:

Behavioural change of citizens and school children towards recycling

Improvement in quality of life with cleaner atmosphere and water resources

GHG emissions reduction by decrease of fossil fuels use

New job opportunities by creating new business models and local investments

### **Specific objectives:**

Increase rate of UCO recycling

Safe disposal of UCO

Raise awareness of citizens for UCO recycling benefits

Initiate the establishment of a viable local energy cooperative

# RES potential to be exploited:

3.000 L/y collected used cooking oil

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