

InnovOleum

Turning Domestic Used Cooking Oil into Renewable ‘Fuel’ for Education and Entrepreneurship: The case of “Tiganokinisi”



Implemented by:



In collaboration with:



isotech
environmental research
and consultancy

www.isotech.com.cy

ΤΗΓΑΝΟΚΙΝΗΣΗ:

Κέρδος στα σχολεία



- **A novel educational-environmental program**
- Promotes sustainability and environmental responsibility through the collection of a harmful waste domestic Used Cooking Oil (UCO)
- **Provides funds to schools to be invested in green technologies/ products**







A perfect example of Circular Economy!

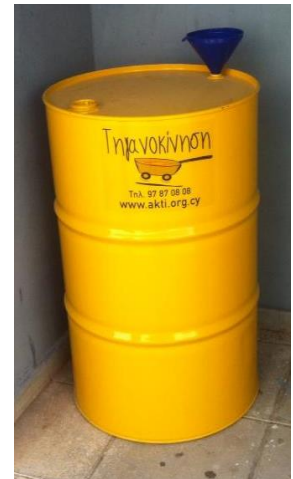
Tiganokinisi explained to school students:



[Video](#)

In a few words

-  UCO collection from schools
-  Sale to Conversion Companies
-  Return of funds to schools
-  Money invested in green infrastructure
-  Green infrastructure/ technology incorporated into the curriculum
→ experiential education
-  Educational presentations at schools by 'Argonaftes' (young scientists/ educators)



Why UCO?

1. **Highly Polluting Waste** with Detrimental Environmental and Economic Impacts

- The World Health Organisation estimates that **one litre of UCO** can **contaminate** up to one **thousand litres** of water.
- UCO in landfills can sustain and feed **landfill fires**.
- Fatbergs cost Thames Water **1 million GBP/yr**
- Oil in wastewater treatment plants cost **700 times** more to clean



The 145-ton 'fatberg' below London
(Image : Thames Water)

Why UCO?

2. Widely Available and Largely Uncollected

Total domestic UCO	Collected domestic UCO	Available domestic UCO	Total commercial UCO	Collected commercial UCO	Available commercial UCO
854,000	47,736	806,264	798,000	669,600	128,400

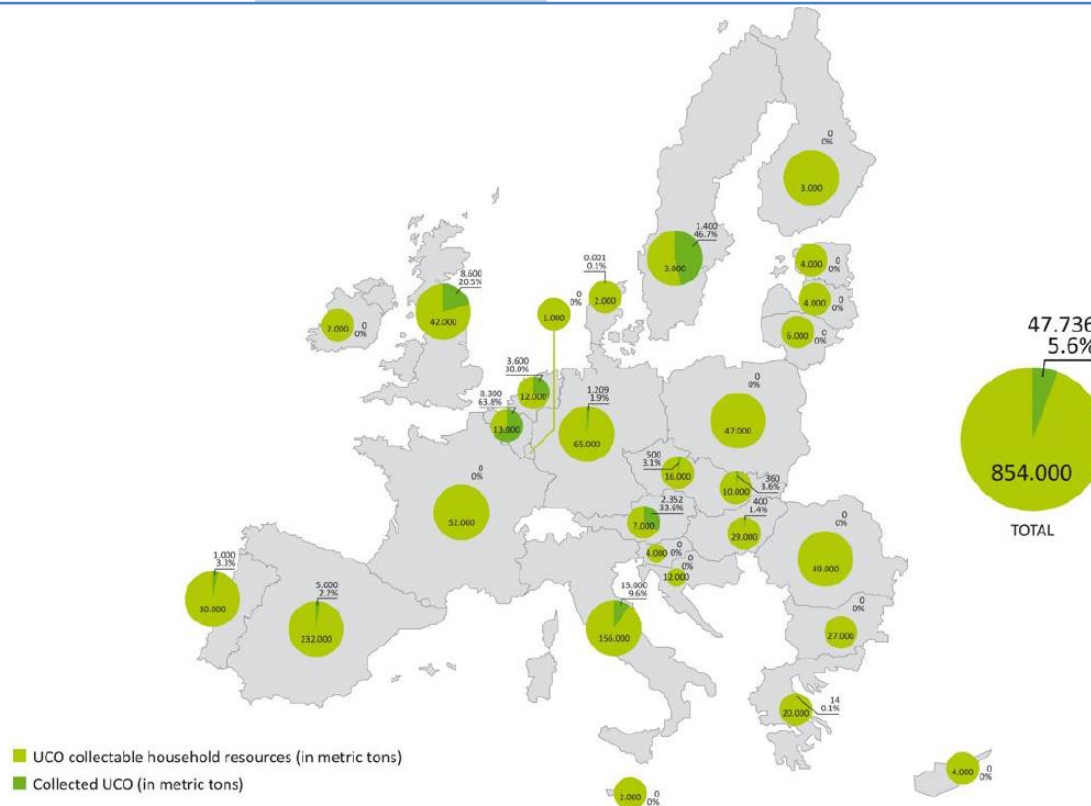


Exhibit 1: Household UCO collection: collected volumes and collectable resources

Why UCO?

3. There is a market for it

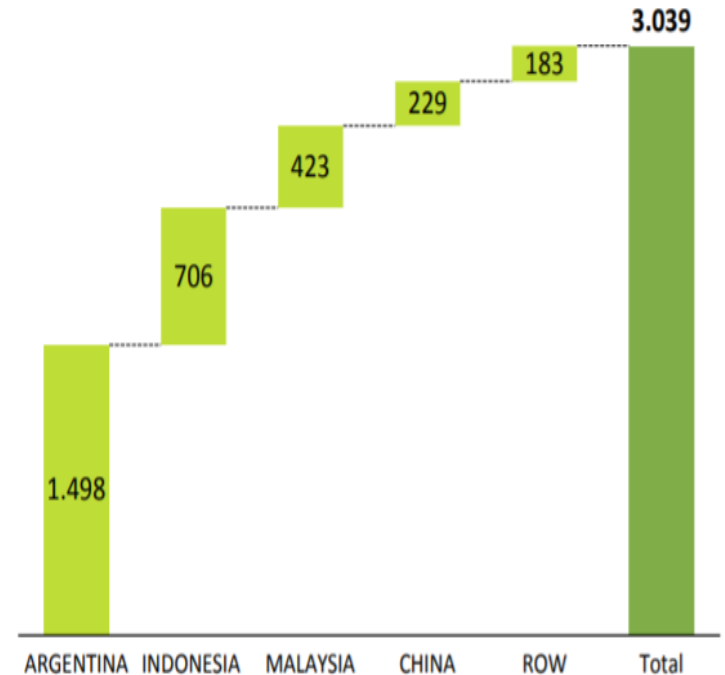
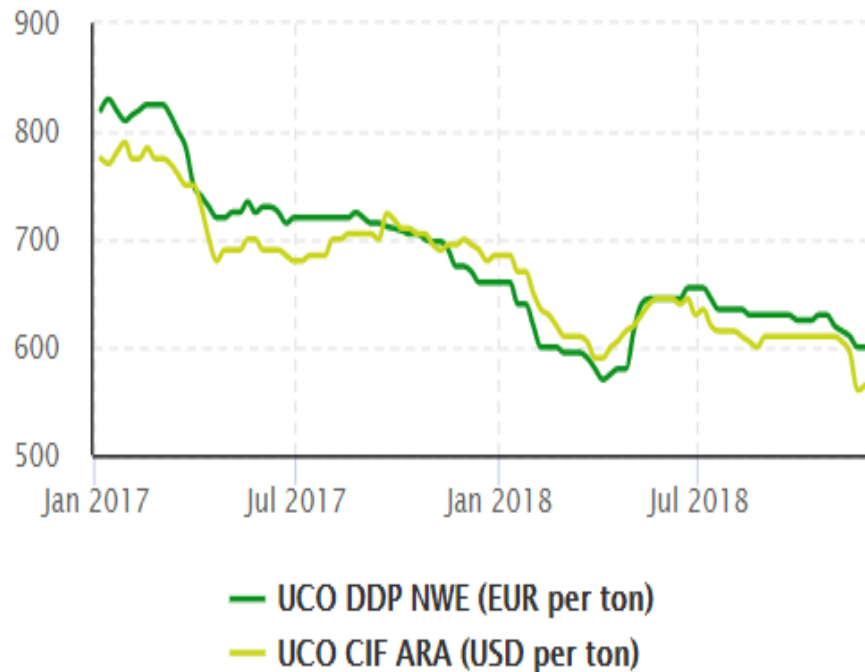


Figure Biodiesel exports to the EU by country in 2018 (in ktons)

Why UCO?

4. Helps meet EU targets

- **Waste Framework Directive (WFD) 2008/98/EC:** UCO as a biowaste must be separately collected and treated;
- **Landfill Directive 99/31/EC:** UCO must be diverted from landfill;
- **Renewable Energy Directive (RED) 2009/28/EC:** 10% target for the use of renewable energy in road transport fuel by 2020;
- **RED II:** 14% of fuel used in transport comes from renewable sources, waste as the primary source;
- **Fuel Quality Directive 2009/30/EC:** reduce the lifecycle greenhouse gas emissions of non-renewable fuels by 10% of 2010 values by the end of 2020 through the use of biofuels;
- **Indirect Land Use Change (ILUC) Directive (EU) 2015/1513 :** use of alternative (not primary) feedstocks for renewable energy. European Biodiesel Board (2018). 224/COM/18. www.ebb-eu.org

Tiganokinisi Results

turning domestic used cooking oil into a renewable 'fuel' for education and innovation

SCHOOLS



420

participate in the programme. That's 85% of Cypriot schools!

200

BUSINESSES

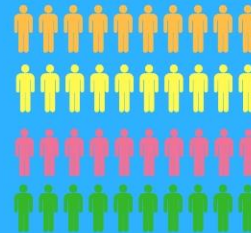


donate their used cooking oil to the schools in their communities

90,000

STUDENTS

participate in the programme, becoming active participants in their school's and their country's sustainability



TONNES

of used cooking oil collected and converted to biodiesel so far

400



>200,000 €

returned to schools and invested in

780

green infrastructure and actions to make the schools more sustainable



InnovOleum

Key facts about the implementation of InnovOleum in Cyprus, as programme 'Tiganokinisi'

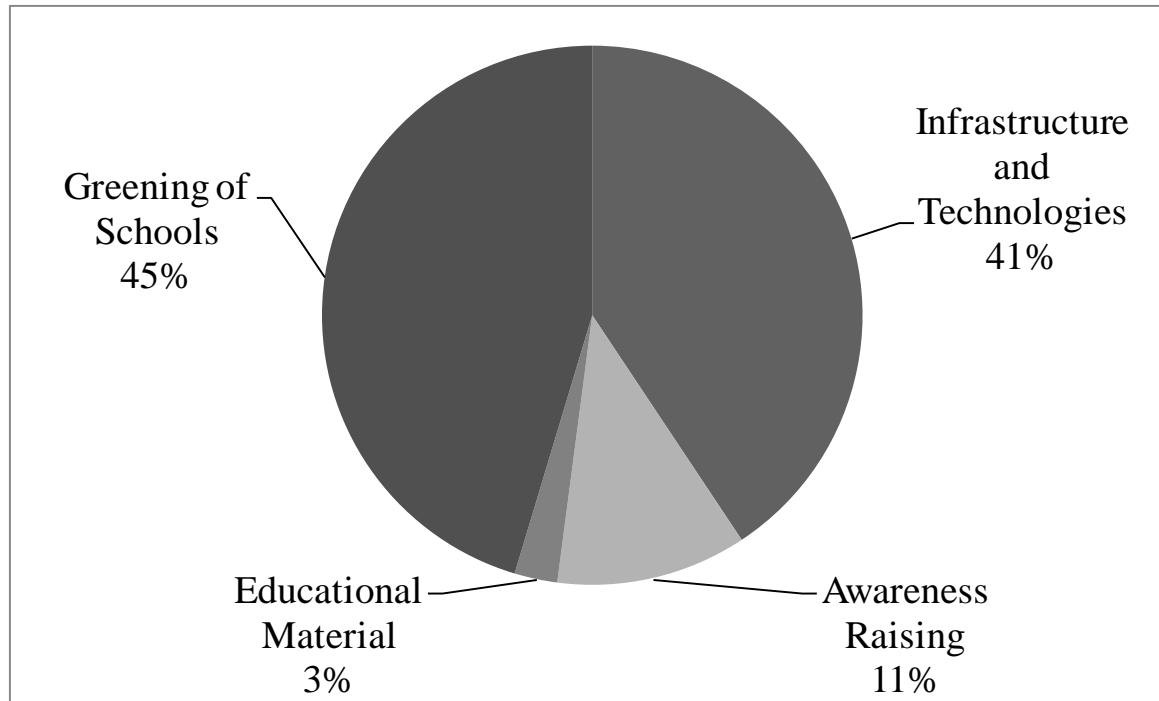
Examples of Sustainable Investments



Examples of Sustainable Investments



Tiganokinisi Results



Experiential Education



Local community Involvement



Oil collection
accessible to all
community
members



On line platform for schools

www.tiganokinisi.eu



Αναζήτηση



Powered by
 cyta



Τηγανοκίνηση ▾



Τα σχολεία μας ▾



Εκπαιδευτική Γωνιά ▾



Παίζω & Κερδίζω ▾



Τα νέα μας



Λάβε μέρος ▾



Επικοινωνία

Ανακοινώσεις



22
Mar
2019

Η Τηγανοκίνηση
επισκέφθηκε το
Νηπιαγωγείο ΦΩΛΙΤΣΑ!!!



22
Mar
2019

Η Τηγανοκίνηση στο ΙΔ'
Δημοτικό Σχολείο στη
Λεμεσό!

Μάρτιος 2019						
Δε	Τρ	Τε	Πε	Πα	Σα	Κυ
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Αρχείο Ανακοινώσεων

Μάρτιος 2019

Φεβρουάριος 2019

Ιανουάριος 2019

Νοέμβριος 2018

Οκτώβριος 2018

Αύγουστος 2018

Ιούνιος 2018

Tiganokinisi and UN Sustainable development Goals



Education (formal and non-formal) on sustainable development
Capacity and training provided to Argonaftes, increasing employability



The collection of domestic UCO contributes to the production of biodiesel, a renewable energy source



Provides job positions for youth



Applies the waste hierarchy to an inappropriately managed waste
Ensures that natural resources are sustainably managed



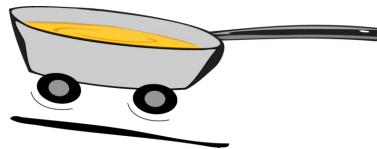
Education on climate change mitigation
Community engagement ensures raised awareness

National and International Acknowledgment of Tiganokinisi

- **SME Instrument Phase I** Grant in 2018
- Recognized as a **Best Practice of Social Entrepreneurship** by the Women Economic Forum (WEF) New Delhi, India in 2016
- Shortlisted in **ELSEVIER's 2015 Green and Sustainable Chemistry** contest
- Received the Cyprus Green Party **Environmental Award** for its contribution to the protection of the environment through the recycling of used cooking oil, in 2015
- It is the only NGO project that is included in the **official Analytical Programme** of the Pedagogic Institute of the Cypriot Ministry of Education.

InnovOleum

Aims to replicate Tiganokinisi and transfer its social and environmental impacts world wide!



Join us!

In turning Domestic Used Cooking Oil into Renewable 'Fuel' for Education and Entrepreneurship

Thank you!

Demetra Petsa

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