



*Management of
edible oils and fats
from households
(Used Cooking Oils
UCO's)*

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Definition and categorization of Used Cooking Oils (UCO's)

❖ UCOs are oils and fats that have been used for cooking or frying in the food processing industry, restaurants, fast foods and at consumer level, in households.



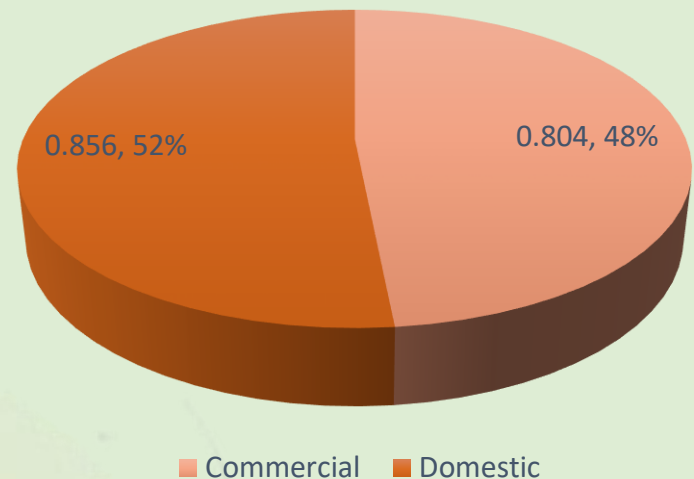
❖ According to European Waste Catalogue, UCO's are categorized as Municipal Wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions, under the code 20 01 25 (edible oils and fats)

Source
<http://www.eubia.org>

Current Situation in Europe

- ❖ Global UCO accurate production is unknown
- ❖ In Europe, recent estimates suggest that 1.66 Mt of UCO are available: 0.854 Mt from the household sector and 0.806 Mt from the commercial sector
- ❖ Commercial UCO has been actively collected in many European countries, initially to serve the needs of the animal feed market.
- ❖ Recycling on a household level is still not gaining traction, even though it represents a significant part of the overall production. Out of the estimated 854,000 tons of domestic UCO produced in Europe, only about 48,000 tons are collected (5.6%), with collection being quite fragmented

European Used Cooking Oils quantities (Mt)



Sources

1. M.I. Loizides, et al.: "Circular Bioeconomy in Action: Collection and Recycling of Domestic Used Cooking Oil through a Social, Reverse Logistics System", Recycling 2019
2. <https://ercim-news.ercim.eu/en127/special/circular-intelligence-using-a-smart-digital-platform-to-encourage-the-collection-of-used-cooking-oil-from-households>

Current Situation in Western Macedonia

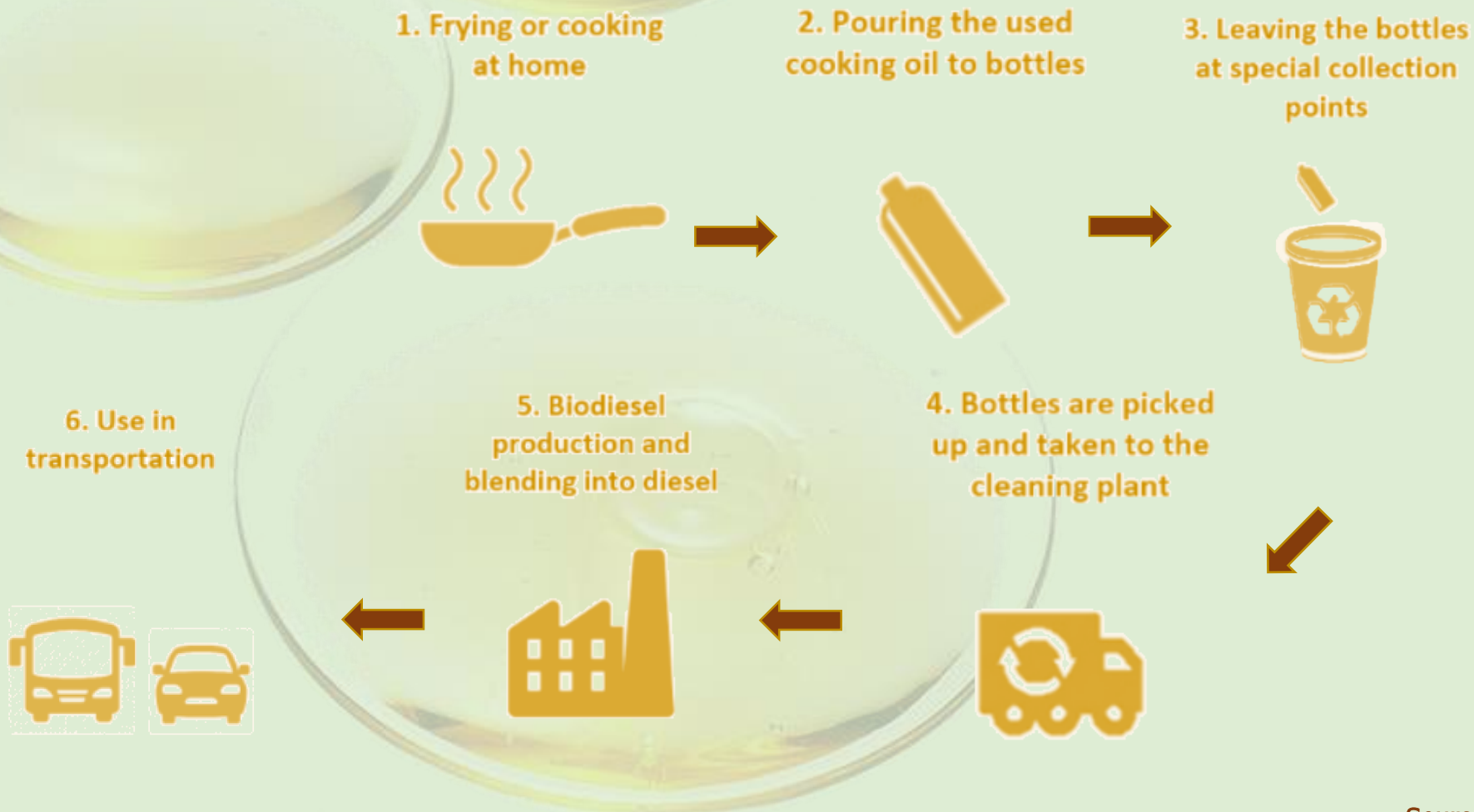
Estimation of production, composition and evolution of biowaste (ton/year) in the Region of Western Macedonia

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Production of MSW (t)	117.775	120.915	120.846	120.800	120.779	120.785	120.767	120.780	120.826	120.906	121.023
Biodegradable	49.701	51.026	50.997	50.978	50.969	50.971	50.964	50.969	50.989	51.022	51.072
Food Waste	43.240	44.393	44.367	44.351	44.343	44.345	44.339	44.343	44.360	44.389	44.433
Green Waste	4.970	5.103	5.100	5.098	5.097	5.097	5.096	5.097	5.099	5.102	5.107
Used Cooking Oils	1.491	1.531	1.530	1.529	1.529	1.529	1.529	1.529	1.530	1.531	1.532

Used Cooking oils represents the 3% of biodegradable MSW

Collection of UCO's

A typical household UCO collection supply chain



Source

Analysis of the current development of household UCO collection systems in the EU,
[https://theicct.org/sites/default/files/publications/Greenea%20Report%20Household%20UCO%20Coll](https://theicct.org/sites/default/files/publications/Greenea%20Report%20Household%20UCO%20Collection%20in%20the%20EU_ICCT_20160629.pdf)

Collection Network in Western Macedonia region

Development of a collection network at regional level through the establishment of specific machines (ATM's) and 240lt capacity bins



Development of a rewarding collection system

Barcode printing



Phase 1

Household registration and supply of specific group of barcodes per household



Barcode placement to bottles

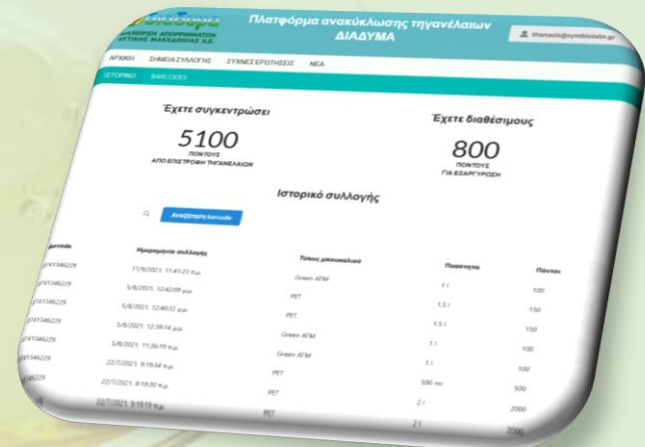
Development of a rewarding collection system

Phase 2

Registration of the household to the e-platform



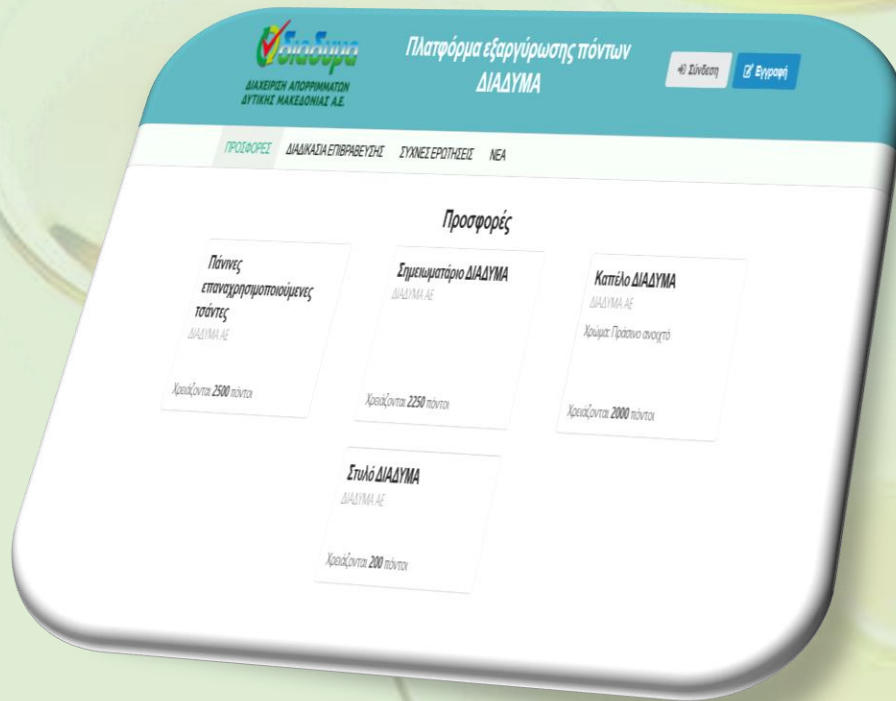
Data collection history / household



Development of a rewarding collection system

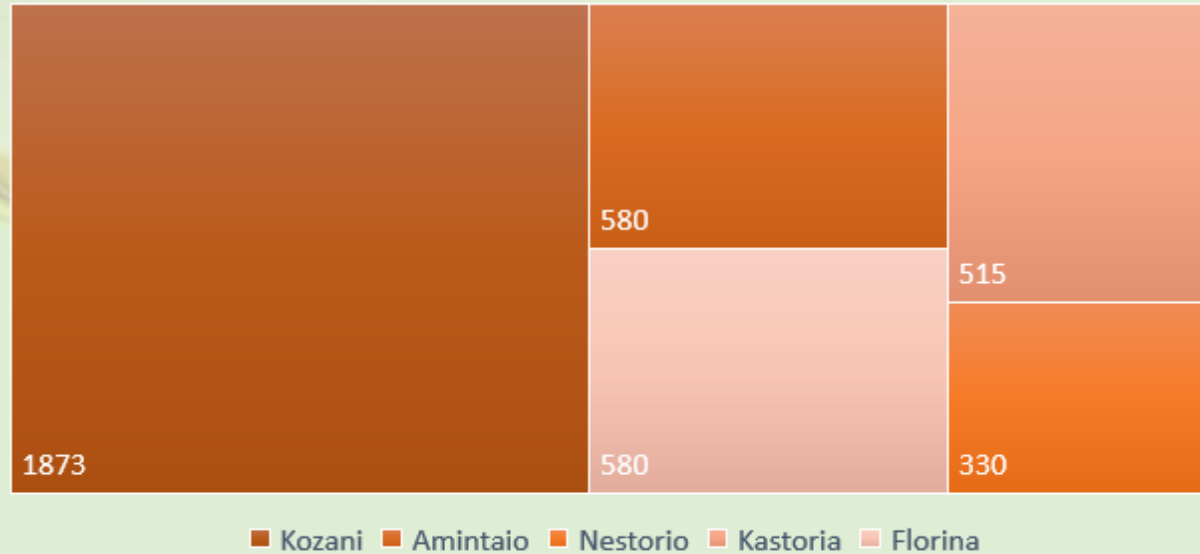
Phase 3

Redemption of points and offer option

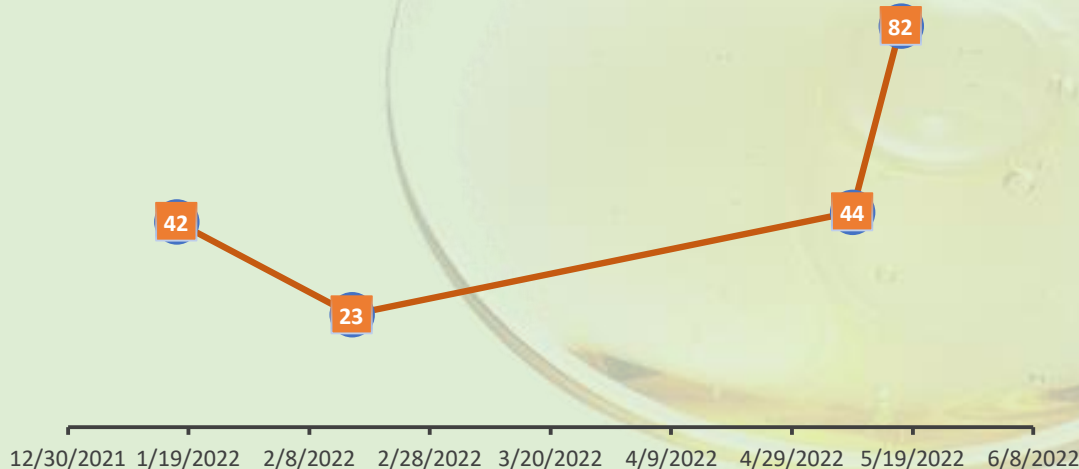


Collection and utilization of collected data

Bottles per Municipality 1st semester 2022



Collected bottles 1st semester 2022



Collection and utilization of collected data

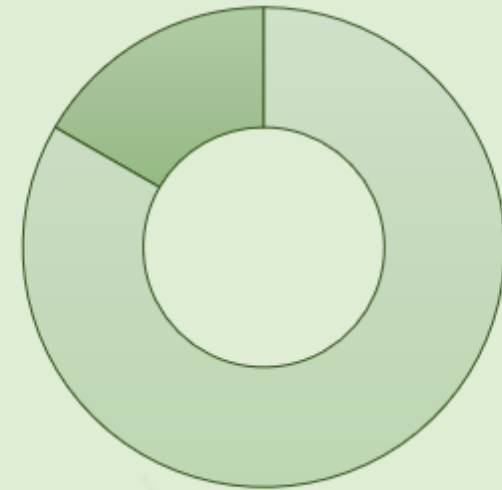
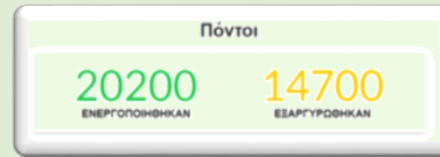
Προσφορές

Οι 10 πιο δημοφιλείς προσφορές

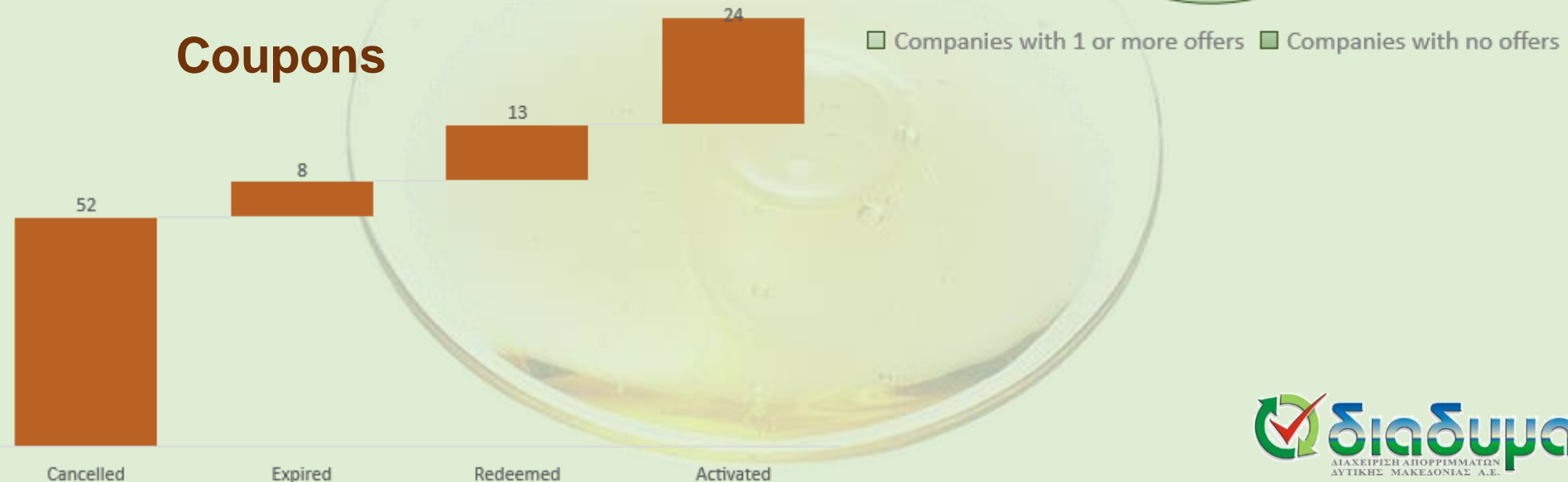
- | | | |
|---|--|---|
| 1 | 1+1 Εσπρεσσο | 9 |
| 2 | 30% Έκπτωση σε εισιτήρια θεατρικών παραστάσεων | 5 |
| 3 | 20% Έκπτωση Latte | 3 |
| 4 | 30% Έκπτωση στους φυσικούς χυμούς | 2 |
| 5 | Τσάντα ανακύκλωσης | 2 |
| 6 | Δωρεάν πίτσα | 1 |
| 7 | Πάνινες επαναχρησιμοποιούμενες τσάντες | 1 |
| 8 | Στυλό ΔΙΑΔΥΜΑ | 1 |

Participating companies

Points collection



Coupons



Public awareness activities

Events at establishment's points of ATM's



Thank you for your attention!!!!

