



# LIFE IP CYzero WASTE: Intelligent monitoring and efficient waste reduction in Cyprus Island

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RETech CONFERENCE

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# Project Duration Budget Structure



## Intelligent Monitoring and Efficient Waste Reduction In Cyprus Island

LIFE-IP CYzero WASTE - LIFE20 IPE/CY/000011

Project duration:  
01/10/2021-30/09/2029 (8 years)

Total Eligible Budget:  
€14,785,848

EU Contribution:  
60%-€8,871,508



[cyzerowaste.com](http://cyzerowaste.com)



Co-funded by  
the European Union



Republic of Cyprus



DEPARTMENT OF  
ENVIRONMENT



National  
Technical  
University  
of Athens



Δήμος Λευκωσίας  
Nicosia Municipality



### 19 Partners:

- ✓ Department of Environment (CB)
- ✓ National Technical University of Athens (AB)
- ✓ Agricultural Research Institute (AB)
- ✓ Cyprus Chamber of Commerce and Industry (AB)
- ✓ 10 Municipalities (AB)
- ✓ 5 Development Agencies (AB)

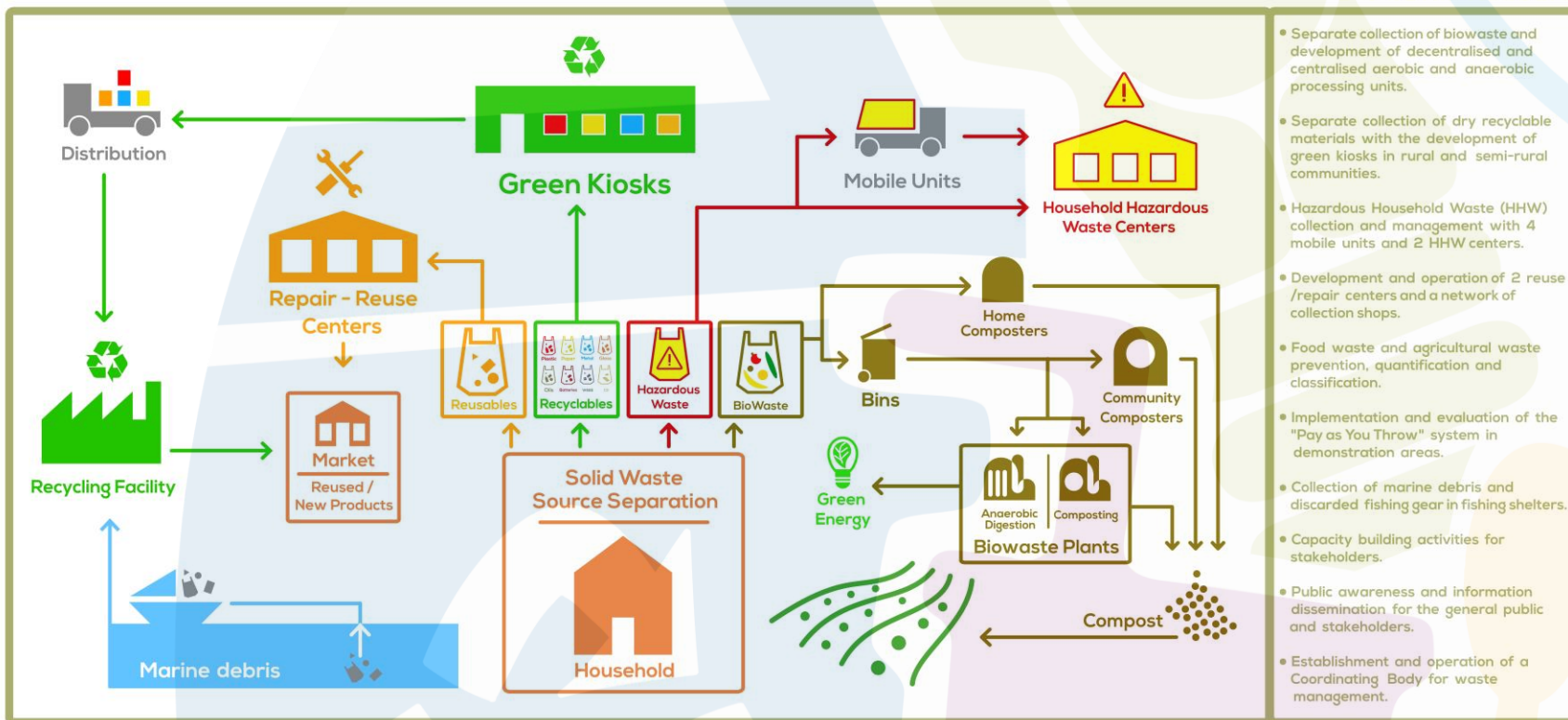
To support the Department of Environment and the Local Authorities of Cyprus to:

- Implement the National Waste Management Plan and the National Waste Prevention Program, 2022-2028.
- Achieve the required Circular Economy Targets
- Implement Concrete Actions all over Cyprus.



### EXPECTED RESULTS

- Separate collection of biowaste and development of decentralised and centralised aerobic and anaerobic processing units.
- Separate collection of dry recyclable materials with the development of green kiosks in rural and semi-rural communities.
- Hazardous Household Waste (HHW) collection and management with 4 mobile units and 2 HHW centers.
- Development and operation of 2 reuse / repair centers and a network of collection shops.
- Food waste and agricultural waste prevention, quantification and classification.
- Implementation and evaluation of the "Pay as You Throw" system in demonstration areas.
- Collection of marine debris and discarded fishing gear in fishing shelters.
- Capacity building activities for stakeholders.
- Public awareness and information dissemination for the general public and stakeholders.
- Establishment and operation of a Coordinating Body for waste management.



## LIFE IP CYzero WASTE contributes to implement:

- ✓ National Circular Economy Plan 2021-2027
- ✓ National Waste Management Plan 2022-2028
- ✓ National Waste Prevention Plan 2024-2030

## LIFE IP CYzero WASTE covers:

- ✓ Population 923.052 (2021 census)
- ✓ 20 Municipalities & 30 Communities Clusters

# Separate collection of bio-waste

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ACTIONS – A2.1, C1

## Municipal-waste-recycling national targets:

## preparing for use & recycling

### National Bio-Waste

#### By 31.12.2023:

- ✓ Collected separately
- ✓ Recycled at source (i.e. by composting)

### Project Bio-Waste

#### By 11.2029:

- ✓ Through the implementation of actions A2.1 & C1 the Project aims to promote sorting at source of bio-waste both in urban areas and in rural/semi-rural areas.
- ✓ Bio-waste treatment in Cyprus through separate collection schemes, composting and anaerobic treatment.
- ✓ The biowaste management scheme shall create **25 new job opportunities**.
- ✓ It is expected that **13.230 tn/y** of pre-selected biowaste will be collected and processed:
  - **8.030 tn/y** (60%) in decentralized organic processing units,
  - **5.200 tn/y** (40%) in central units (MBT Larnaca, MBT Limassol and new Unit in Paphos).

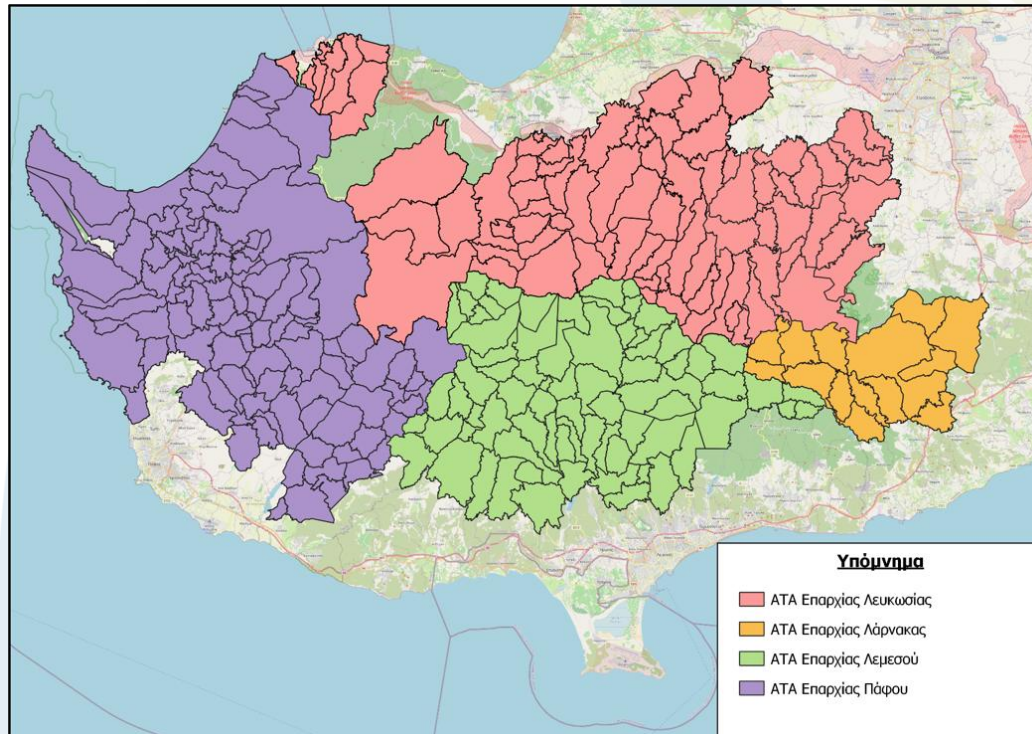


Project target of decentralized units: **12.653 tn/y**

**Complementary funding: €10.000.000 (Cohesion Policy and Common Agr. Policy)**



# Home / school decentralized composting



**6 community composting units** in rural/semi-rural and mountainous areas of Cyprus:

**16.000 home / school composters** with population <150 in rural/semi-rural and mountainous areas of Cyprus:

- ✓ 14.249 in 132 Communities (<150 residents)
- ✓ 1.307 in remote areas
- ✓ 400 in Aradippou, Larnaca (Demo Project on voluntary basis)

**Supply of organic waste bins** in remote areas:

- 30.500 of 10lt
- 1.100 of 120lt
- 3.050 of 240lt
- 350 of 360lt

# Separate collection of recycling materials

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ACTIONS – A2.2, C2

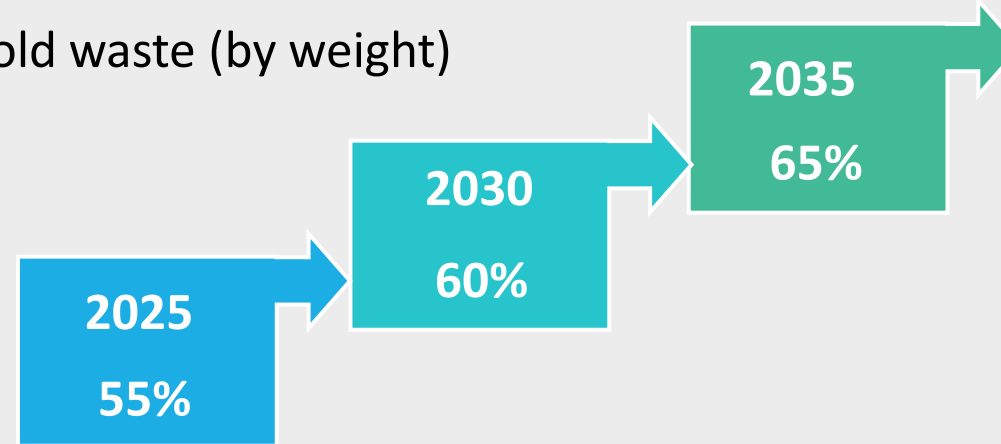
## Municipal-waste-recycling targets:

- Recycling
- Packaging waste
- Landfill

### Target:

Recycling of household waste (by weight)

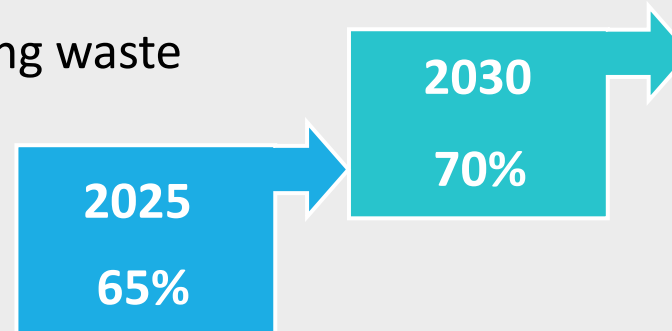
## National Municipal Waste



### Target:

Recycling of packaging waste

## National Packaging Waste





## Municipal-waste-recycling national targets:

### Recycling

## Project Recycling Materials

### By 11.2029:

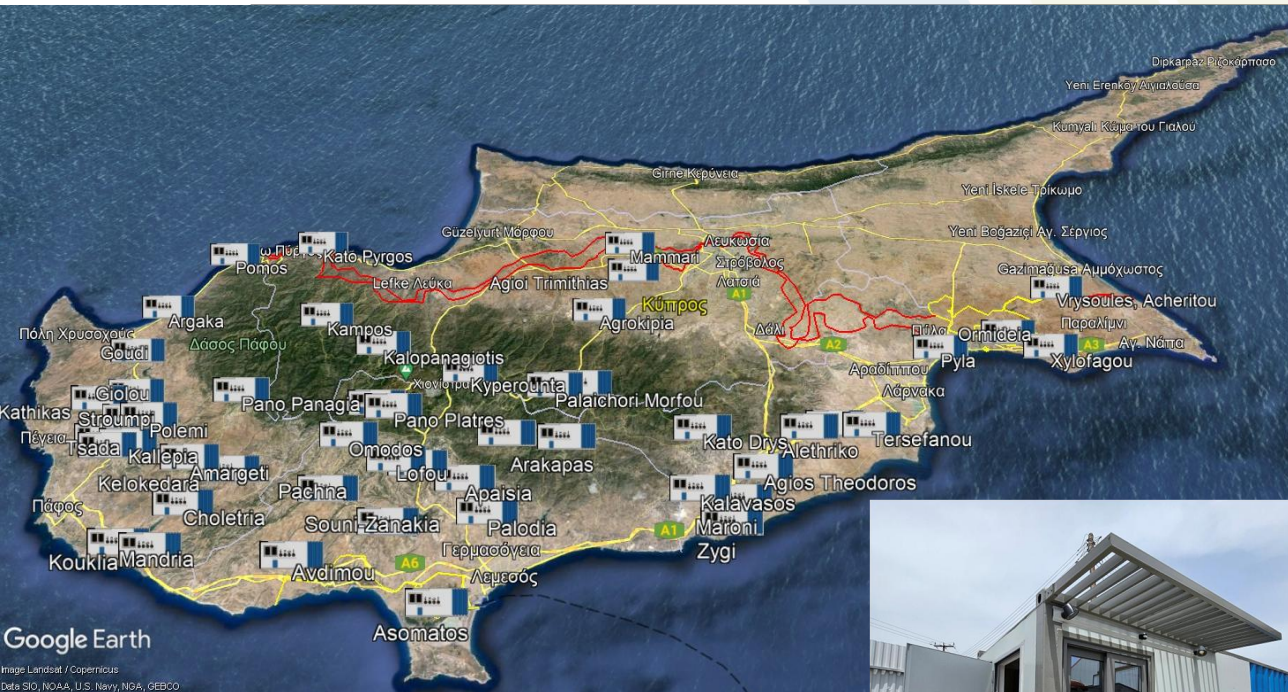
- ✓ Through the implementation of actions A2 & C2 the Project aims to promote sorting at source of recycling materials in urban areas and in rural/semi-rural areas.
- ✓ A total of 50 Green Kiosks will be gradually installed in remote areas of the five districts of Cyprus.
- ✓ The Green Kiosk scheme shall create **25 new job opportunities**.
- ✓ Achieve EU 2030 targets (Directive 2018/851) with 5% prevention rate.
- ✓ It is expected that **8,570 tn/year** of high-purity recyclable materials will be collected through appropriate management within the Green Kiosks.



Project target:     **20 GKs: 2.500 tn/year**  
                             **50 GKs: 8.234 tn/year (max 11.850 tn/y – per GK 237 tn/y)**

**Complementary Fund: €3.300.000 (RRF)**

# Sites for installation of 50 Green Kiosks



- ✓ Installation of 50 Green Kiosks in **rural/semi-rural and mountainous areas** in the 5 districts of Cyprus
- ✓ 1-3 Green Kiosks will be installed per community complex, that are **not served by any other collective recycling system** or licensed waste carriers/transporters
- ✓ Installation period: Sept 2024 – May 2026
- ✓ **Recyclable materials: Paper, plastic, metal, textiles**
- ✓ Special material streams: edible fats and oils, lamps, etc.

# Hazardous Household Waste management scheme

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ACTIONS – A2.3, C3

## Municipal-waste-recycling national targets:

preparing for use & recycling

### National HHW

**By 01.01.2025:**

- ✓ Separate collection hazardous waste generated by households (HHW)

### Project HHW

**By 11.2029:**

- ✓ Through the implementation of actions A2.3 & C3 the Project aims to promote sorting at source of HHW in urban and rural/semi-rural areas.
- ✓ The HHW management scheme shall create **10 new job opportunities**.
- ✓ It is estimated that **1.680 tn/y** of hazardous waste of various categories will be collected.



Project target: **1.680 tn/y**

**Complementary Funds: €380.000 (Norway Grants)**



# Management scheme of Hazardous Households Waste



- ✓ The system consists of **4 operational mobile units** in synergies with:
  - ✓ The 36 Green Points network
  - ✓ Existing Management Collective Systems / Initiatives under establishment
  - ✓ The 50 Green Kiosks network
  - ✓ The 2 repair / reuse centers
- ✓ The systems installed shall be able to **cover at least 60% of Cyprus' population** and to reach at least 50% separate collection rate at targeted area.
- ✓ Project replication with **10 permanent units** in 10 Municipalities (Project's beneficiaries) in 2025.



# Results of 4 HHW mobile units



Operational period: 16/10/2023 – 30/3/2024

Visits in 135 local authorities (44 Municipalities and 91 Communities).

Visits of 17.000 people, of which 7.231 students και 9.799 citizens.

HHW collected in the mobile units 193kg of pharmaceuticals, 100kg of printing inks, 203kg of paints, 177 kg of pesticides, 1,008 kg of electrical and electronic appliances.

TV and Radio Campaign (Oct 2023)

Info days in 7 Municipalities and 1 Community

2 questionnaires:

- online 3 – 5/2022, 450 replies
- At the spot 10/2023 – 3/2024, 150 replies

# Repair and Reuse Scheme

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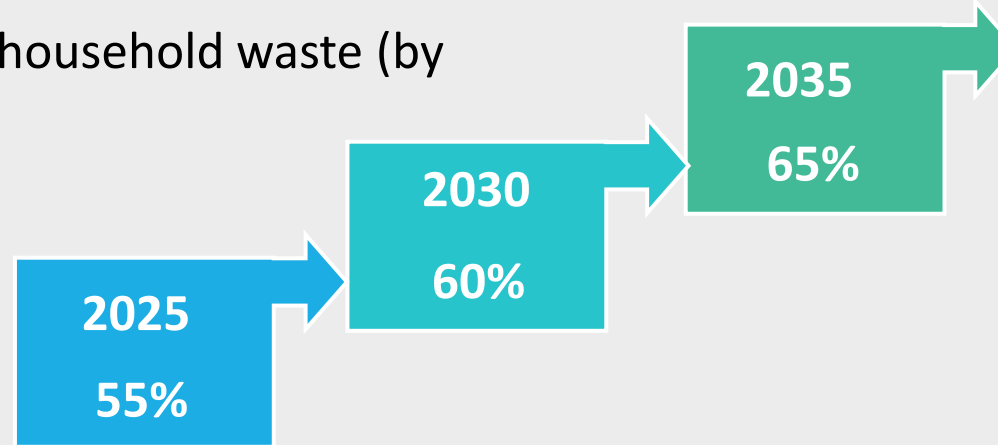
ACTIONS – A2.5, C5

## Municipal-waste-recycling national targets:

### Preparing for use

#### Target:

Preparing for use of household waste (by weight)



### National Municipal Waste

#### By 11.2029:

- ✓ Through the implementation of actions A2.5 & C5 the Project aims at implementing the waste reuse and repair (preparation for reuse) policy in Cyprus.
- ✓ The planned activities will result in the reuse/repair scheme by **3.500tn/y**.
- ✓ The Reuse/Repair scheme shall create **20 new job opportunities**.
- ✓ The Reuse Centres will collect **1.000 tn/y** of waste/material streams and distributed to the reuse shops



Project target: **3.500tn/y**

### Project Municipal Waste

# Reuse and repair centers



- ✓ **2 reuse/repair centres** shall be constructed at strategic places in Cyprus one located in Nicosia and one in Limassol.
- ✓ A network of at least **36 reuse shops** will be created to support the operation of the Reuse/Repair Centres. The shops will be installed in 36 Green Points Network.
- ✓ Waste/material streams including:
  - a) electrical appliances,
  - b) furniture,
  - c) clothing and accessories,
  - d) books,
  - e) toys and
  - f) other household goods.



# Economic Instruments

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ACTIONS – A2.6 & C6 – PAY AS YOU THROW SCHEMES

ACTIONS – A1.3 & A1.4 & - ECONOMIC INSTRUMENTS



## Municipal-waste-recycling national targets:

### Preparing for use

#### National Municipal Waste

##### Objective:

Use of economic instruments and other measures to provide incentives for the application of the waste hierarchy

#### Project Municipal Waste

##### By 11.2029:

Through the implementation of actions A2.6 & C6 the Project aims to promote economic instruments such as:

- ✓ pay-as-you-throw schemes,
- ✓ landfill charges,
- ✓ extended producer responsibility schemes,
- ✓ incentives for local authorities.

The production of **12.237 tn/y** of secondary raw materials for market uptake resulting from the sustainable management of MSW.

**Complementary funding for PAYT: €25.000.000 (Cohesion Policy)**

# Expected results – PAYT in CY

Το έργο υλοποιείται στο πλαίσιο του Προγράμματος Πολιτικής Συνοχής –ΟΔΕΙΑ 2021-2027- με τη συγχρηματοδότηση της ΕΕ

Με τη συγχρηματοδότηση της Ευρωπαϊκής Ένωσης

Κύπρος

ΠΕΡΙΒΑΛΛΟΝΤΟΣ



Πληρώνω  
Όσο  
Πετώ  
Τίποτα δεν πάει χαμένο

**ΞΕΚΙΝΑΜΕ!**

Το Τμήμα Περιβάλλοντος σας καλεί σε ειδική εκδήλωση ενημέρωσης με αφορμή την έναρξη της Εκστρατείας Επικοινωνίας για το “Πληρώνω όσο Πετώ με προπληρωμένη σακούλα”.

**ΠΑΡΑΣΚΕΥΗ 10 ΜΑΪΟΥ 2024**  
ΔΙΘΥΣΙΑ ΠΟΛΛΑΠΛΩΝ ΧΡΗΣΕΩΝ ΥΠΟΥΡΓΕΙΟΥ ΟΙΚΟΝΟΜΙΚΩΝ



Π.Α. ΜΕΧΡΙ 08 ΜΑΪΟΥ, ΤΗΛ 22 452053

- Monitoring and optimization of the PAYT schemes will be conducted in **20 municipalities and 30 community clusters** following the local governmental reform, in all five districts of Cyprus.
- The **residual waste** generated by each household shall be reduced by 2030 to 40%
- The **recyclable fraction** is expected to increase at least 40%
- Design of a fair and equitable **waste tariff for prepaid bag and prepaid bin.**
- The tariff will result from the assessment of the PAYT suggested schemes and would be a single one for all municipalities or community clusters.

# Desing of the PAYT Scheme

## €25 mil. Programme “THALIA 2021-2027”

### Implementation of the PAYT to households and apartment buildings

- Prepaid bag (10, 35 & 56L) & Fee for residual waste
- Bags for recycling (paper / cardboard packaging, plastic / metal packaging)
- Grey bins 10, 40, 120, 240, 360L and bags for organic waste
- Collection of glass from collection points (bell bins)

### Implementation of the PAYT in large producers (hotels, universities, airports, camps, hospitals)

- Prepaid bins (120-1.100L) & Fee for residual waste
- Compressors / balers / bins for recyclable materials
- Bins 40, 120, 240, 360, 1.100L & biodegradable bags & small stand-alone composters for organic waste
- Collection of glass from collection points (bell bins)
- Cooperation with infrastructures and other programmes of the collection at source of the local authorities.

# Local PAYT communication campaign Municipality of Aradippou

GET STARTED!  
NOVEMBER 1<sup>st</sup>  
2024

- ✓ Fruits and vegetables
- ✓ Meat and fish (with bones)
- ✓ Pasta, rice, flour, grains and legumes
- ✓ Bakery products (e.g. bread, cakes, sweets)
- ✓ Dairy products (e.g. cheese, heavy creams, yoghurt)
- ✓ Eggs and eggshells
- ✓ Coffee grounds, tea bags and filters (bulk and in paper bags)
- ✓ Nuts, shells and pits
- ✓ Solid food products that have expired (without packaging)

- ✓ Small amounts of garden scraps (lawn, leaves, small branches, etc.)
- ✓ Small amounts of paper towels (Caution: not colored, illustrated or laminated papers)
- ✓ Small amounts of fireplace ashes
- ✓ Sawdust from wood (not processed wood, colored etc.)

Do not place in biodegradable bag:

- ✗ Liquids
- ✗ Cooking oils, fats
- ✗ Plastic bags
- ✗ Packages of all kinds

Pay As You Throw Scheme / Sort at Source and Separate Collection of Food Waste  
We start strong, change habits, become better. Together we will change the way we manage our organic waste!



The LIFE4P CYZero Waste (LIFE20 IP/CY/000011) project co-funded by EU LIFE Programme.

ORGANIC  
WASTE  
COLLECTION



Feb 2024 – Completion of the PAYT Feasibility Study of the Municipality of Aradippou and Communities of Kellia, Troulli, Koshi.

A model municipality for the pilot application of the PAYT scheme:

- ✓ 1.11.2024 – Collection at source of organing waste
- ✓ 1.1.2025 – Implementation of the PAYT scheme

- Jun 2024 – Dissemination of a flyer to the households
- Jun & Oct 2024 – Delivery of 9.350 bins 10L, 8.100 bins 40L, 225 bins 240L, 115 bins 360L
- Oct 2024 – Delivery of 1<sup>st</sup> batch of biodegradable bags
- Oct 2024 – Info Days for students & citizens

# Marine debris collection schemes

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ACTIONS – A2.7 & C7



## Municipal-waste-recycling national targets:

## Marine debris

### National Marine Debris

#### Objective:

Reduce by 2025 marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

### Project Marine Debris

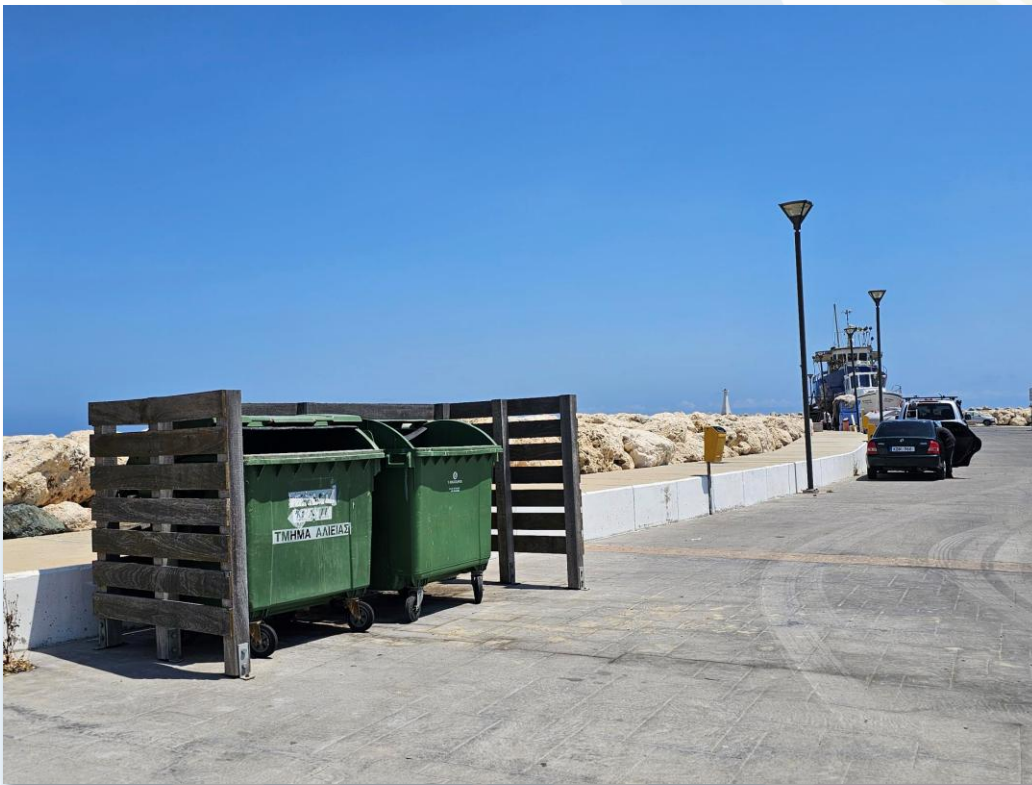
#### By 11.2029:

- ✓ Through the implementation of actions A2.7 & C7 the Project aims focuses on collection and recycling of mooring ropes from ports and marine debris from sea.
- ✓ At least **186tn** of marine litter and 12tn of mooring ropes will be collected within 48months demonstration period (99 tn/y)



Marine debris scheme: **247.5tn/y**

# Marine derbis scheme



- Study for the marine derbis collection stations' refurbishment.
- Development of **software tool** for mapping and monitoring of marine debris.
- Development of **marine derbis collection stations** and schemes in 5 fishing shelters.
- The **equipment** for the storage for 5 fishing shelters will be:
  - 5 wheeled bins of 1.100L for mixed plastic,
  - 5 bins for mooring ropes and used fishing nets,
  - 5 bins for plastic (PET).
- **Market exploitation** of marine derbis and mooring ropes collected, including laboratory analyses of materials testing.

# Expected results



- 2 fishing shelters in 2 districts of Cyprus (Paralimni and Zygi) will be involved in the scheme.
- Replicate the marine litter collection stations to 3 more fishing shelters (Limassol, Paphos, Polis Chrysochous)
- At least 30 fishing trawlers per fishing shelter shall participate in the scheme.
- Involve the Fishermen Associations.



PROJECT  
*Zero Waste Cyprus*  
waste management culture



# Thank you Ευχαριστώ

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*Zero Waste Cyprus*