

# Regenerative approaches for building climate change resilience into EU agricultural regions prone to desertification



LIFE Ref. No: LIFE21 CCA/CY/101074744

Project location: Cyprus, Greece

Budget: €2,326,710.16

EC Co-funding 60%: €1,394,355.00

Duration: 51 months

Starting Date: 01/10/2022

End Date: 31/12/2026



Dr. Savvas Zotos  
Open University of Cyprus

31/03/2026



The primary objective of Agroassis is to assist climate change adaptation in the agricultural sector of the EU's two most south easterly countries, Cyprus and Greece, and beyond.

AgrOassis will develop, demonstrate and promote innovative techniques, best practices, methods and approaches, as well as close-to-market solutions in areas currently exposed to desertification.



The Life AgrOassis is co-funded by the LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**

WP3 Soil improvement by mulching and minimum or no-tillage

WP4 Resilient Hedgerow Installation in Burnt and/or Degraded Agricultural Land

WP5. Sustainable Production of Compost and its application on Degraded Soils



The Life AgrOasis is co-funded by the  
LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**

## WP3 Soil improvement by mulching and minimum or no-tillage



The Life AgrOasis is co-funded by the  
LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**

## WP3 Soil improvement by mulching and minimum or no-tillage



The Life AgrOasis is co-funded by the  
LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**

## WP3 Soil improvement by mulching and minimum or no-tillage



The Life AgrOasis is co-funded by the  
LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**

## WP3 Soil improvement by mulching and minimum or no-tillage



The Life AgrOasis is co-funded by the  
LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**

## WP3 Soil improvement by mulching and minimum or no-tillage



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**

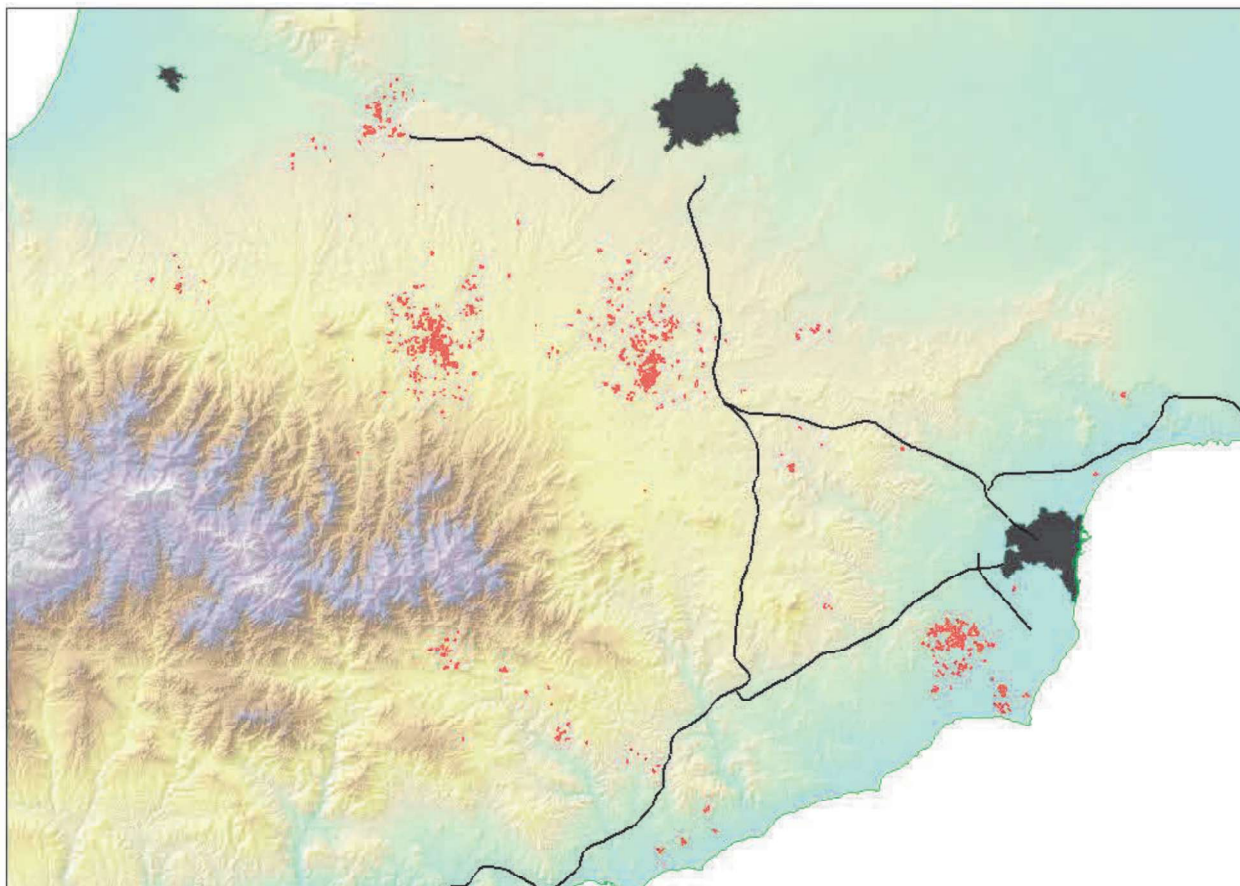
## WP3 Soil improvement by mulching and minimum or no-tillage



The Life AgrOasis is co-funded by the  
LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**

## WP3 Soil improvement by mulching and minimum or no-tillage



782 cereals  
203 trees

350 ha = 3.5 km<sup>2</sup>



The Life AgrOasis is co-funded by the  
LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**



## WP3 Soil improvement by mulching and minimum or no-tillage

### Progress Update on Sampling and Measurements

- **Ongoing process:** Sampling and laboratory analysis
- **Equipment:** construction of a double infiltration ring, construction or purchase of **wet sieving apparatus**



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**

## WP3 Soil improvement by mulching and minimum or no-tillage

### T.3.3 Optimization weed management monitoring system for certification of active cultivation using remote sensing methods (OUC) (M13-M51)

A group of **remote sensing approaches** will be tested and evaluated to design a methodology **easily replicated and implemented by the public authorities**.

<b>Aim:</b>	Weed management monitoring Classification of various land plot parameters (e.g. soil vegetation cover, soil moisture holding capacity) related towards weed management
<b>Timeframe:</b>	Seasonal and monthly remote sensing data



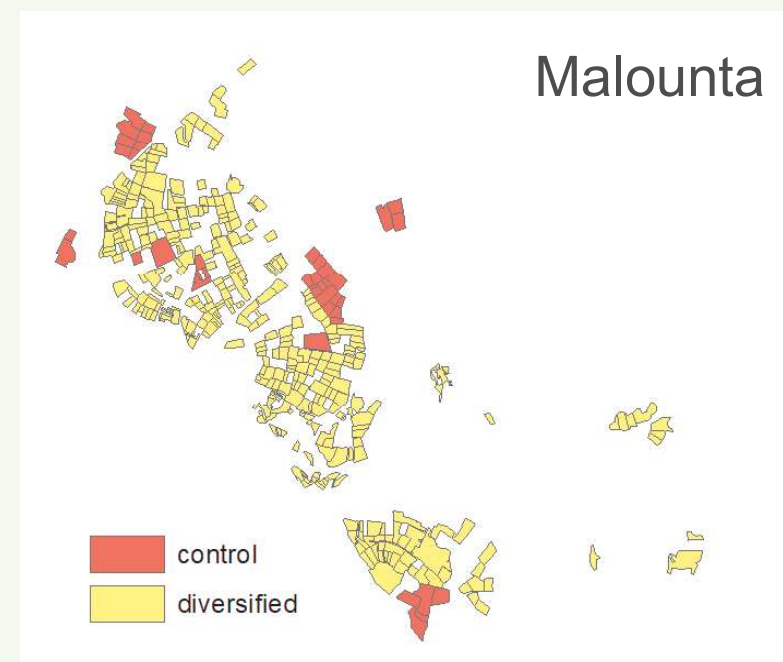
The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**

## WP3 Soil improvement by mulching and minimum or no-tillage

### T.3.3 Optimization weed management monitoring system for certification of active cultivation using remote sensing methods (OUC) (M13-M51)

	diversified	control	Total
Cereal	649	112	761
Trees	163	42	205
			966



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**

## WP3 Soil improvement by mulching and minimum or no-tillage

### T.3.3 Optimization weed management monitoring system for certification of active cultivation using remote sensing methods (OUC) (M13-M51)

Row Labels	Average of signature	2022	2023	2024	2025	2026
Tersephanou	17/05/2024					
Mavronero	24/05/2024	Y1	Y2	Y3	Y4	
Deneia	30/05/2024	Y1	Y2	Y3	Y4	
Akaki	31/05/2024	Y1	Y2	Y3	Y4	
Malounta	26/06/2024	Y1	Y2	Y3	Y4	
Pera_Oreinis	26/06/2024	Y1	Y2	Y3	Y4	
Arediou	26/06/2024	Y1	Y2	Y3	Y4	
Mazotos	11/09/2024	Y1	Y2	Y3	Y4	
Lympia	18/12/2024	Y1	Y2	Y3	Y4	
Geri	19/02/2025		Y1	Y2	Y3	Y4
Paliomethochc	07/03/2025		Y1	Y2	Y3	Y4
Choirokitia	04/04/2025		Y1	Y2	Y3	Y4
Kampia	04/04/2025		Y1	Y2	Y3	Y4
Psimolofou	04/04/2025		Y1	Y2	Y3	Y4
Toxni	04/04/2025		Y1	Y2	Y3	Y4

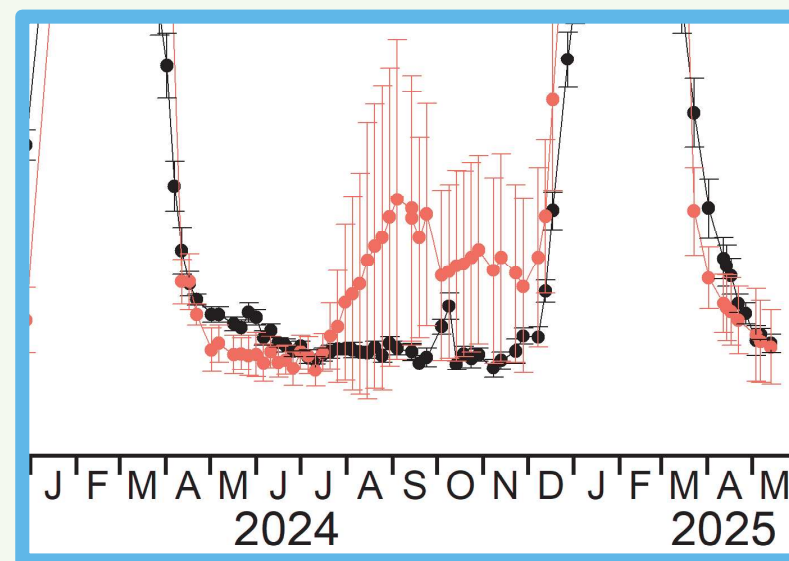
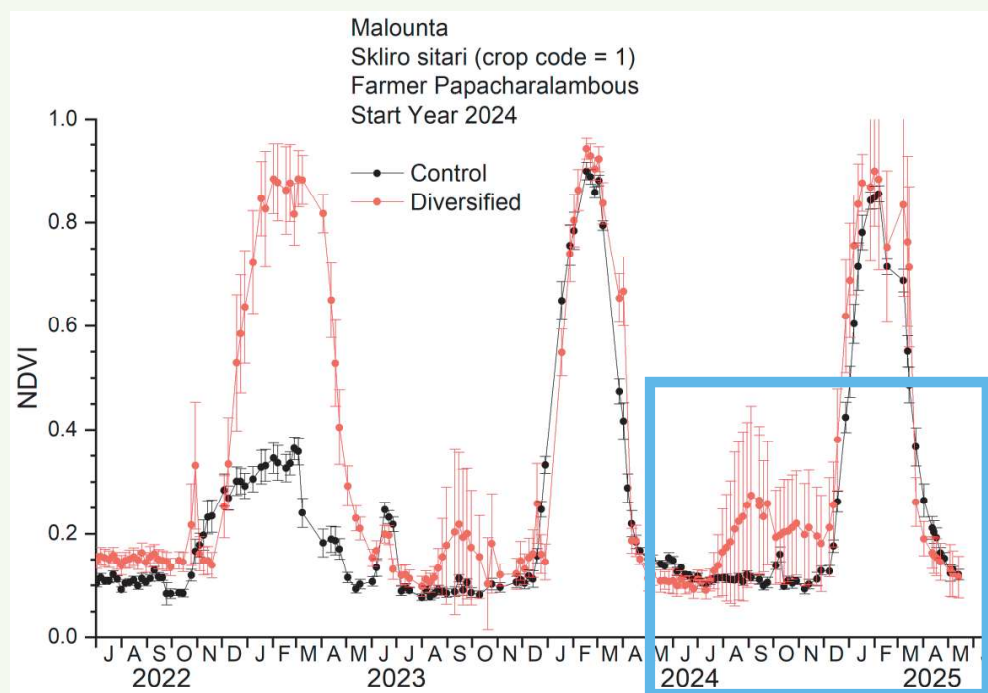


The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**

## WP3 Soil improvement by mulching and minimum or no-tillage

### T.3.3 Optimization weed management monitoring system for certification of active cultivation using remote sensing methods (OUC) (M13-M51)



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**

## WP3 Soil improvement by mulching and minimum or no-tillage

### T.3.3 Optimization weed management monitoring system for certification of active cultivation using remote sensing methods (OUC) (M13-M51)

**Result:**

A **step-by-step methodological approach** will be developed providing detailed information on the **national authorities** towards optimizing weed management monitoring.

This methodology will allow **rapid assessment** of practices within agricultural land plots contributing towards the control of land degradation and desertification.



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**

## WP4 Resilient Hedgerow Installation in Burnt and/or Degraded Agricultural Land



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 4: Resilient Hedgerow Installation**

## WP4 Resilient Hedgerow Installation in Burnt and/or Degraded Agricultural Land

Under WP4 within 500ha of cereal and orchards prone to desertification in Cyprus (ca. 350ha) and Greece (ca 150ha)

**ca. 30km of hedgerows (6000 trees and 12000 shrubs)**

**ca. 3km of land in Greece (600 trees and 1200 shrubs)**



The Life AgrOasis is co-funded by the  
LIFE+ programme of the European Union

**Work Package 4: Resilient Hedgerow Installation**

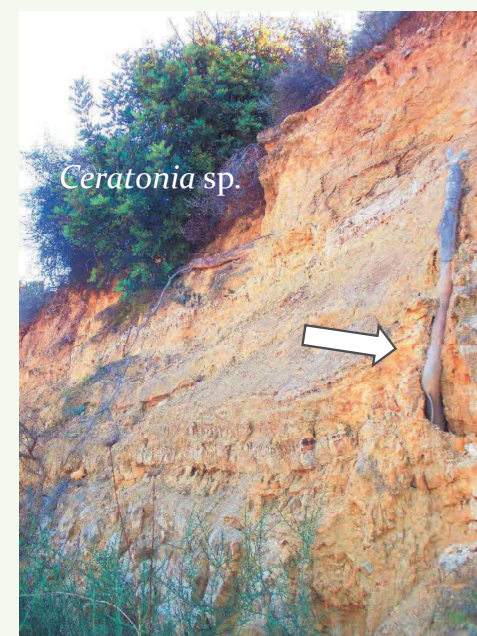
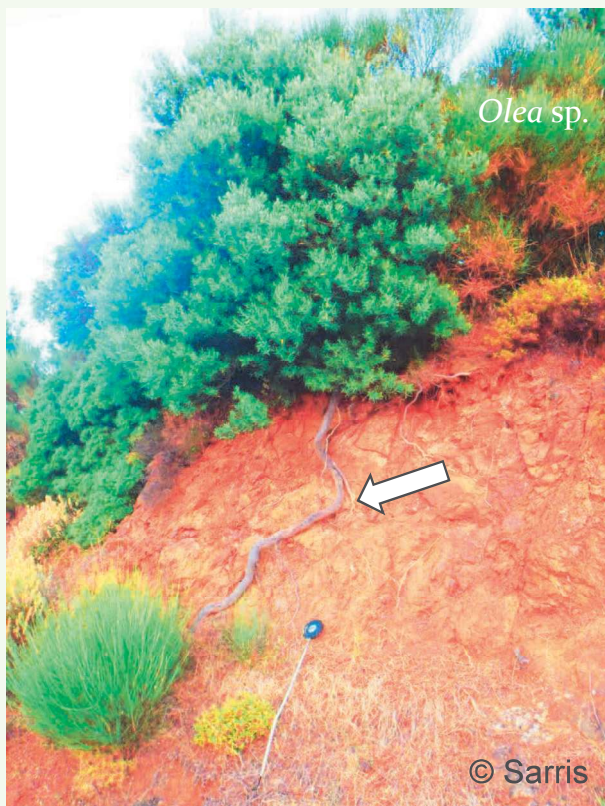
## WP4 Resilient Hedgerow Installation in Burnt and/or Degraded Agricultural Land



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 4: Resilient Hedgerow Installation**

## WP4 Resilient Hedgerow Installation in Burnt and/or Degraded Agricultural Land



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 4: Resilient Hedgerow Installation**

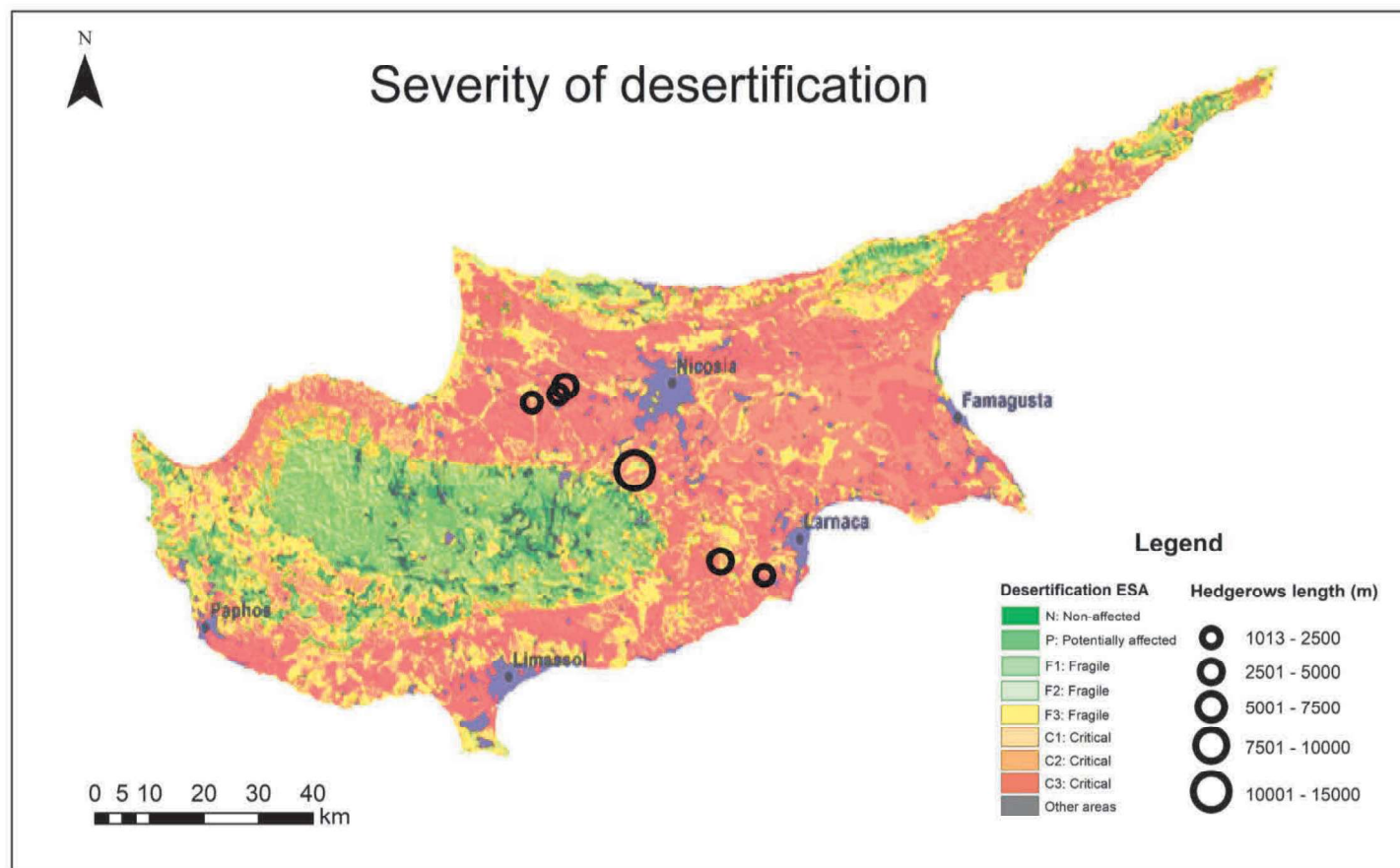
## WP4 Resilient Hedgerow Installation in Burnt and/or Degraded Agricultural Land



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

### Work Package 4: Resilient Hedgerow Installation

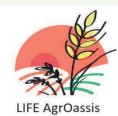
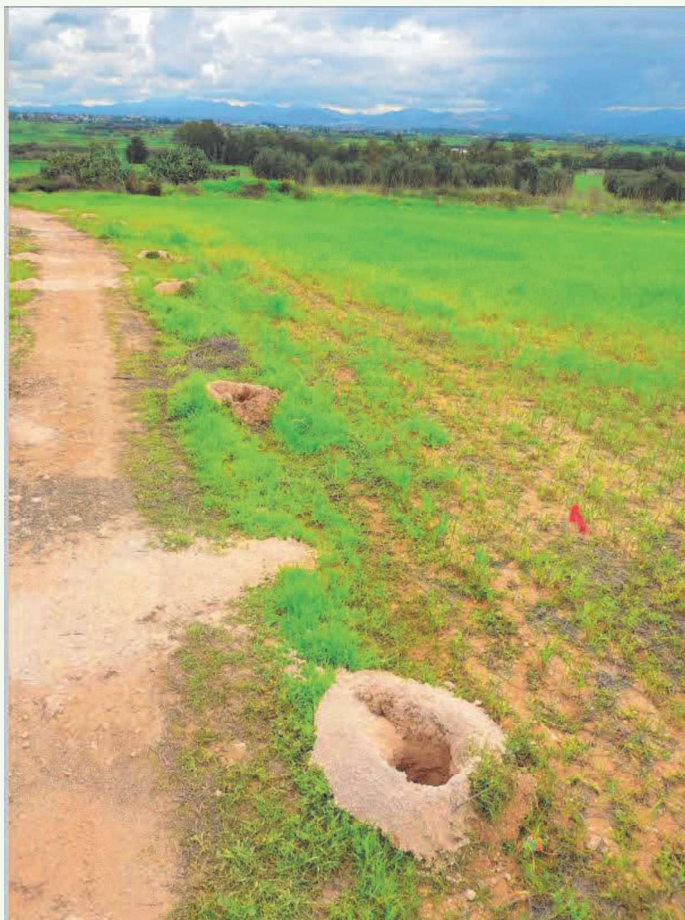
## WP4 Resilient Hedgerow Installation in Burnt and/or Degraded Agricultural Land



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 4: Resilient Hedgerow Installation**

## WP4 Resilient Hedgerow Installation in Burnt and/or Degraded Agricultural Land



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

### Work Package 4: Resilient Hedgerow Installation

## WP4 Resilient Hedgerow Installation in Burnt and/or Degraded Agricultural Land



Δενδροφύτευση στο Γέρι με 39 εθελοντές



Δενδροφύτευση με την ΟΕΒ



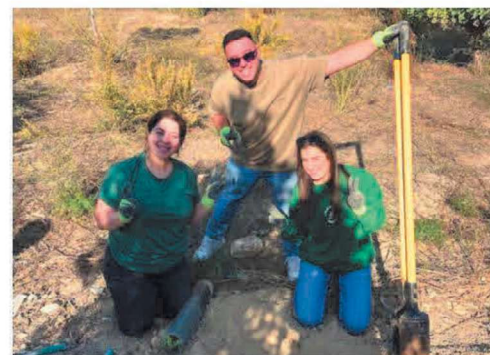
Δενδροφύτευση με την Εθνική Φρουρά



Δενδροφύτευση με την εταιρεία Vassos Eliades Ltd



Η UNFICYP συμμετέχει στις δενδροφυτεύσεις μας



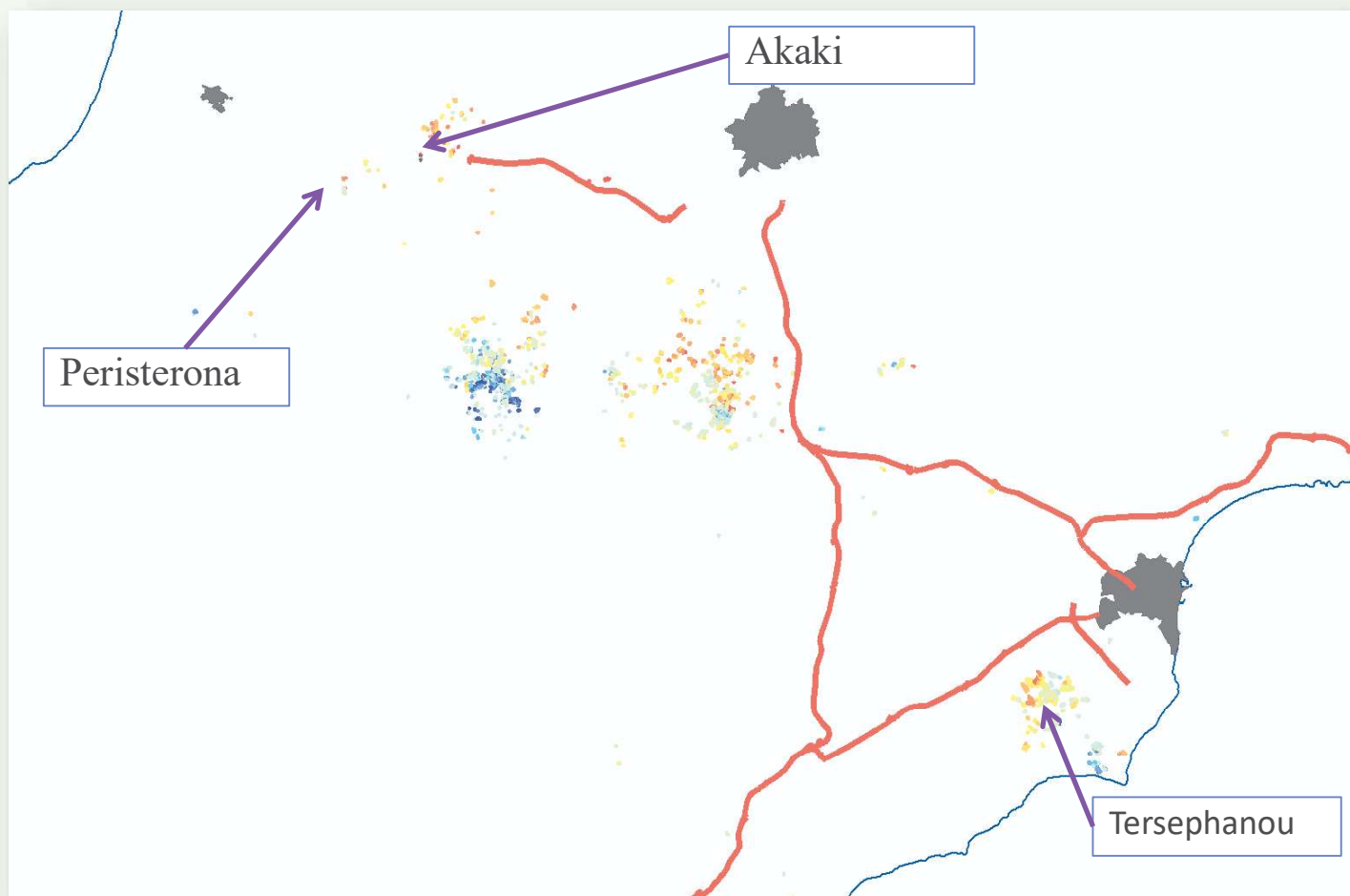
Η Ancoria Bank συμμετέχει στις δενδροφυτεύσεις μας



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 4: Resilient Hedgerow Installation**

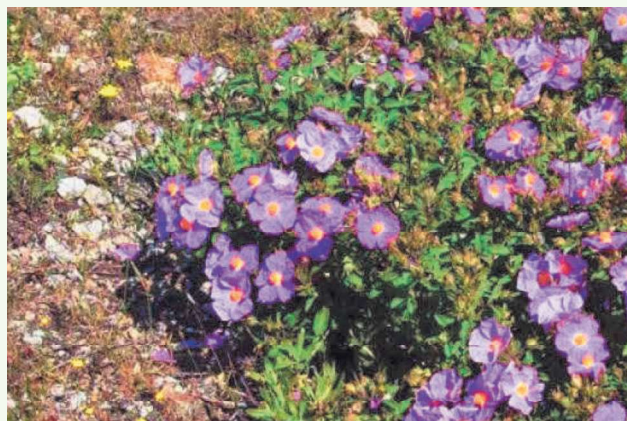
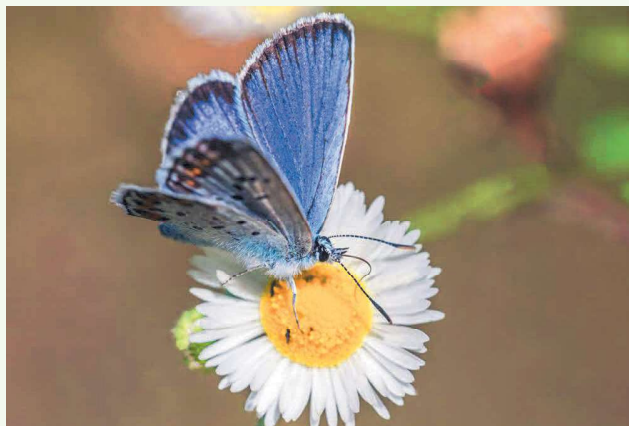
## WP4 Resilient Hedgerow Installation in Burnt and/or Degraded Agricultural Land



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 4: Resilient Hedgerow Installation**

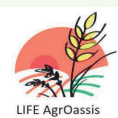
## WP4 Resilient Hedgerow Installation in Burnt and/or Degraded Agricultural Land



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 4: Resilient Hedgerow Installation**

## WP4 Resilient Hedgerow Installation in Burnt and/or Degraded Agricultural Land



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 4: Resilient Hedgerow Installation**

## WP5. Sustainable Production of Compost and its application on Degraded Soils



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 5: Sustainable Production of Compost**

## WP5. Sustainable Production of Compost and its application on Degraded Soils



"Poor quality" green municipal waste is transported to the ARI's pilot composting unit



mixing "poor quality" green waste with manure.



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 5: Sustainable Production of Compost**

## WP5. Sustainable Production of Compost and its application on Degraded Soils



Watering and stirring the compost heaps



The ARI unit was equipped with a compost turner made by a local agricultural machinery manufacturer, at a low cost.



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 5: Sustainable Production of Compost**

## WP5. Sustainable Production of Compost and its application on Degraded Soils



The attempt was successful! This compost will be incorporated in fields this year.

The answer to the initial question “would it be feasible and effective to design small production units in Cyprus, equipped with inexpensive machinery” is no, or at least yes, but under conditions



The Life AgrOasis is co-funded by the LIFE+ programme of the European Union

**Work Package 5: Sustainable Production of Compost**



*Regenerative approaches for building climate change resilience  
into EU agricultural regions prone to desertification*

**Thanks for your  
attention**



The Life AgrOasis is co-funded by the  
LIFE+ programme of the European Union

**Work Package 3: Soil improvement by mulching**