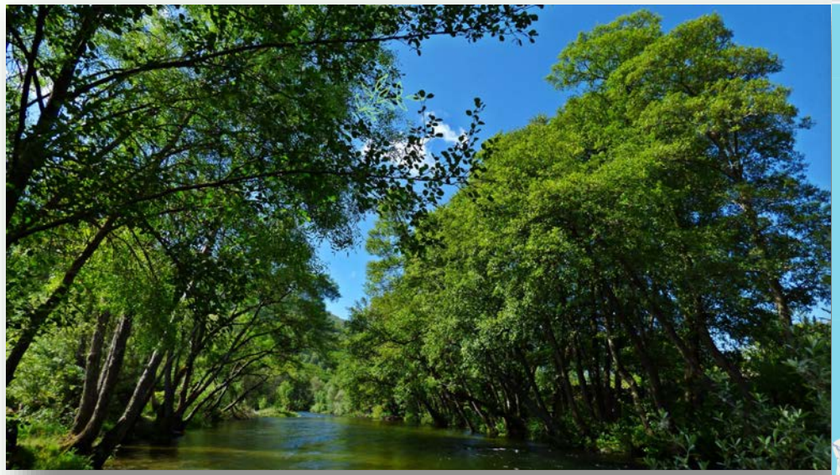
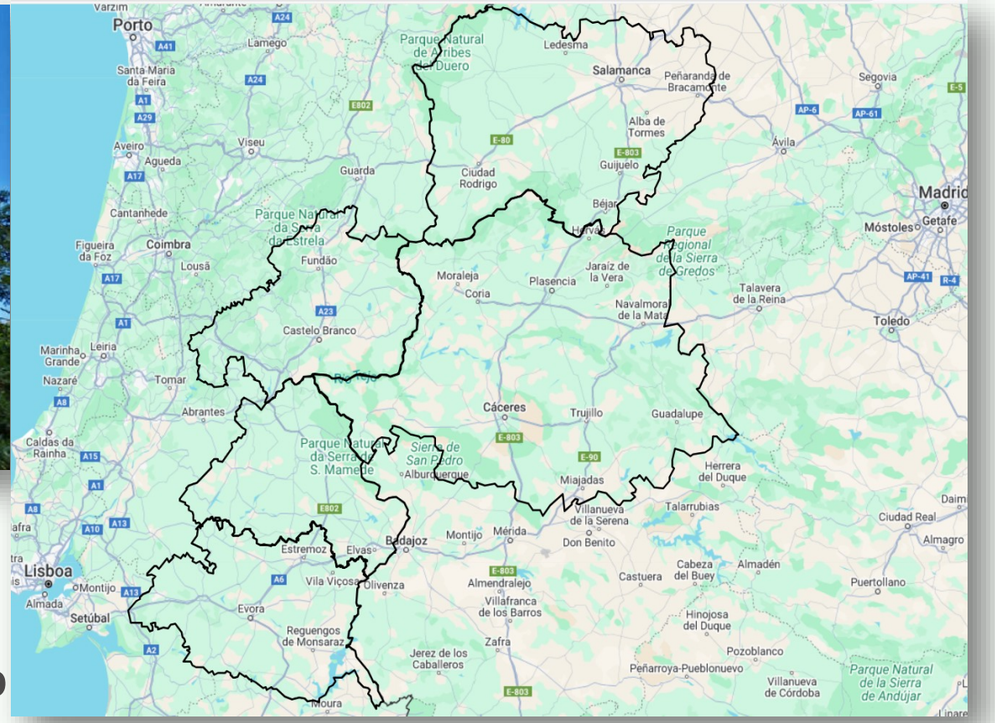
LIFE Alnus Taejo: Restoration and Conservation of of Mediterranean Alder Forests





Project Location

Western International Tagus River Basin spanning Spain & Portugal

Speakers

José L. GARCIA

Martin C. GIMENEZ

Project Overview

Project: LIFE Alnus Taejo

Objective: Restoration and conservation of Mediterranean alder forests (Habitat 91E0*)

Coordinating Beneficiary

Universidad Politécnica de Madrid (Spain)

POLITÉCNICA Montes

ambienta ingeniería y servicios agrarios y forestales

cesefor CORAZÓN FORESTAL, espíritu investigador

ctaex centro tecnológico nacional agroalimentario

ecosalix Sistemas Ecológicos de Engenharia Natural

UNIVERSIDADE DE ÉVORA

1. Large-scale Implementation of Ecological Restoration

516

Kilometers

Riverbanks covered

1032

Hectares

Surface area covered

50K

Square meters

- Removal of invasive species as Acacia dealbata, Arundo donax

Native Plant Propagation

Reforestation Area

Silvicultural treatments implemented across more than 15 hectares

Plant Propagation

12,500 plants grown in in-situ nurseries

Native Trees

1,775 native trees planted including Alnus, Salix, Frangula, and Celtis

Problems & Resolutions in Implementation

Disease Challenge

Phytophthora alni infection threatened alder replanting

Technical Solution

In-situ propagation facilities established

Preventive Measures

Strict hygiene protocols implemented

Administrative Challenges

Administrative delays in approvals → Adaptive action phasing, improved stakeholder engagement.

2. Promotion of Cost-effective, Natural Regeneration

Natural Regeneration Approach

Natural regeneration promoted in river stretches using minimal interventions.

Passive Recovery Methods

Riverbank delineation and invasive control allowed passive recovery.

Natural Regeneration Challenges and Solutions

1

Invasive Species Competition

Competition from invasive species like *Phytolacca americana* or *Arundo donax* reduced native regeneration → Managed via selective clearing.

2

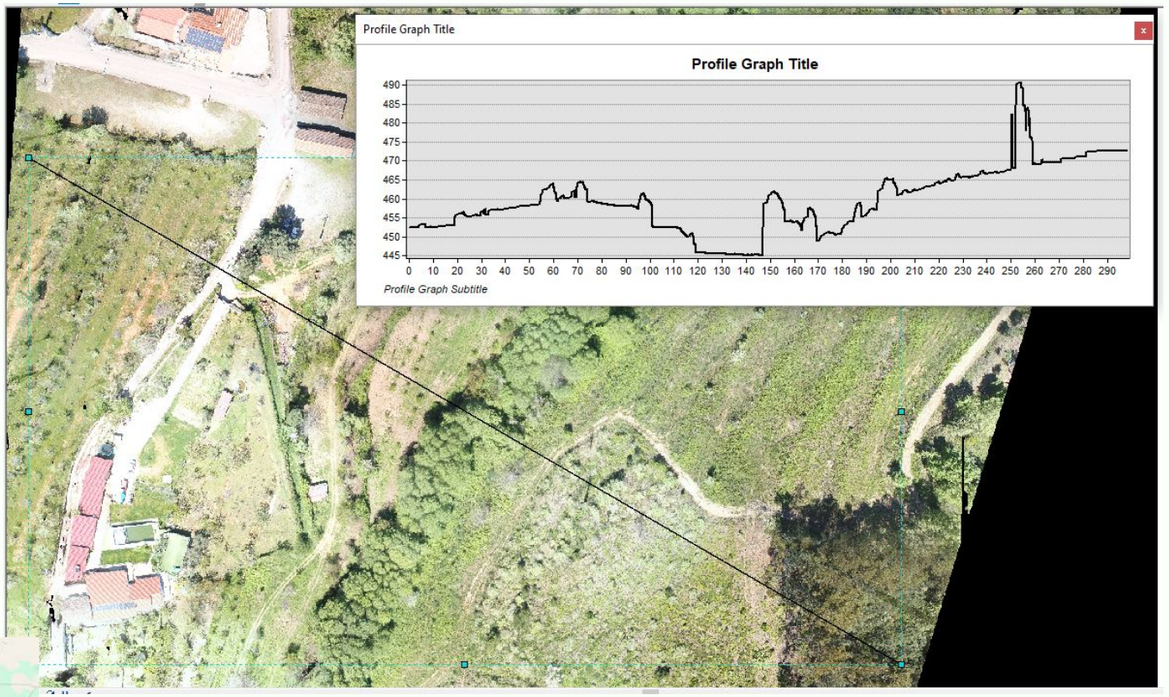
Characterization Delays

Delayed action due to characterization phases → Phased scheduling and early stakeholder involvement enhanced acceptance.

3. Management of Old-growth and Primeval Forests

Detailed Mapping System

A detailed mapping and classification system (516 km analyzed) guided management intensity across zones.



Conservation Focus

Sections of riverbank with mature riparian forests were identified and managed for conservation or regeneration

Old-growth Forest Management Challenges

Accessibility Issues

Accessibility issues and slow data acquisition → Use of remote sensing and drone data improved mapping accuracy.

Remote Sensing + Drone Surveys = Improved Accuracy

1

2

Bureaucratic Barriers

Bureaucratic barriers for intervention near protected zones → Early liaison with authorities enabled phased permits.

4. Close-to-Nature Forest Management Principles

1

Applied Silviculture

Applied silviculture focused on enhancing native species regeneration and ecological structure.

2

Integrated Actions

Integrated actions (planting, bioengineering, and invasive control) tailored to microhabitats.

Ecological Benefits

Hydrological Function

Improved water regulation and quality

Connectivity

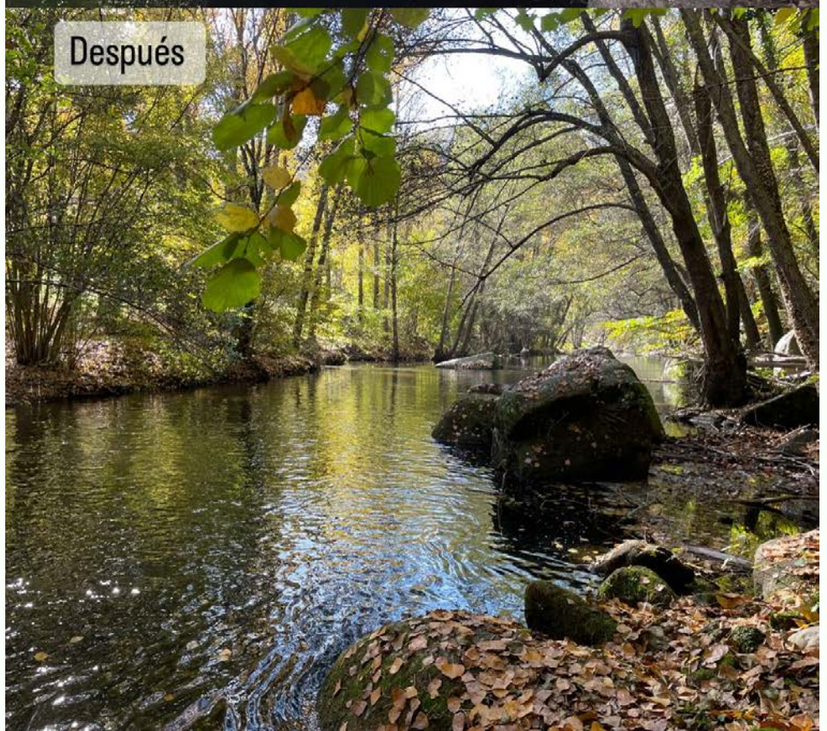
Enhanced ecological corridors along riparian zones

Biodiversity

Increased habitat for native fauna and flora

Climate Resilience

Use of riparian species adapted to future climate scenarios



Policy & Stakeholder Challenges

Challenge Identification

Policy misalignment in Portugal (overlapping authorizations) and stakeholder resistance (e.g., landowners)

Partnership Formation

Early collaborations with ICNF and APA

Demonstration Sites

Practical examples showcased restoration benefits

Stewardship Agreements

post-restoration demonstrations improved buy-in.

5. Key Lessons Learned

In-situ Nurseries

Local propagation reduces disease spread and costs

Stakeholder Engagement

Phased documentation and community involvement enhance adaptability

Early Characterization

Initial ecological assessment is crucial but resource-intensive

Key Lessons Learned

Demonstration and Communication Impact

Demonstration Sites

Demonstration sites and communication campaigns showcased the ecological and social benefits of close-to-nature management, helping shift attitudes and practices.

Key Lessons Learned

Community Engagement and Education

Education and outreach: Over 70 workshops and activities engaged 2,600+ people, strengthening local awareness and stewardship.

Socio-economic and ecosystem service monitoring: Workshops and surveys with local communities assessed the impact on livelihoods, ecosystem services, and social perceptions, guiding adaptive management.

Policy Engagement

EU Alignment

Project activities aligned with EU Habitats Directive requirements.

Policy Dialogue

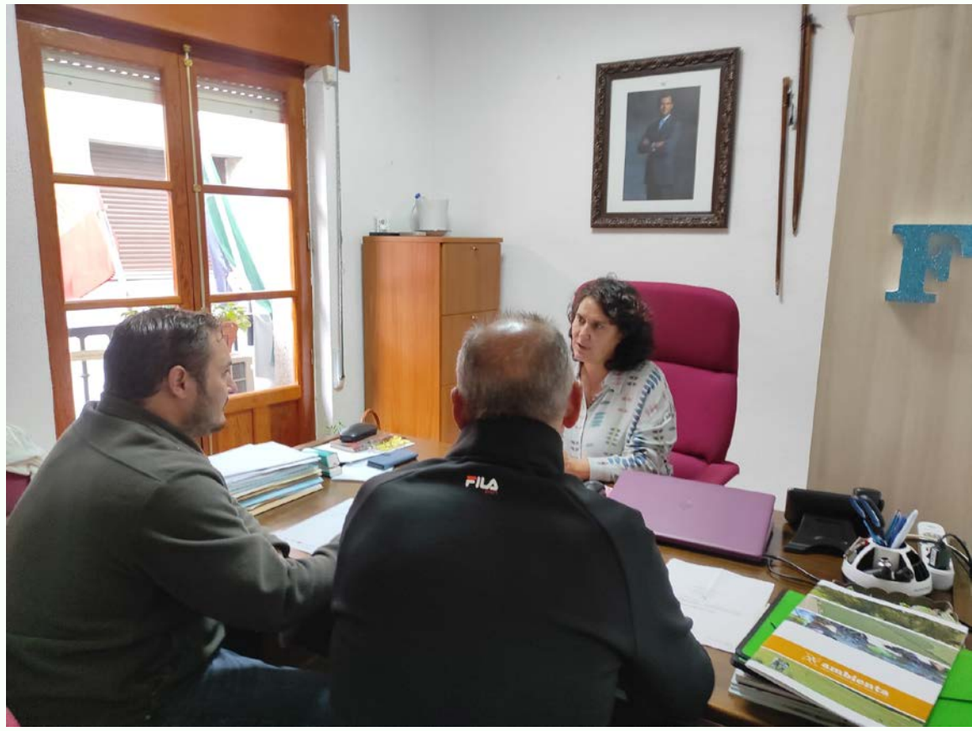
Promoted mainstreaming of restoration practices into regional planning.

Stewardship Innovation

26 stewardship agreements signed with landowners and municipalities.

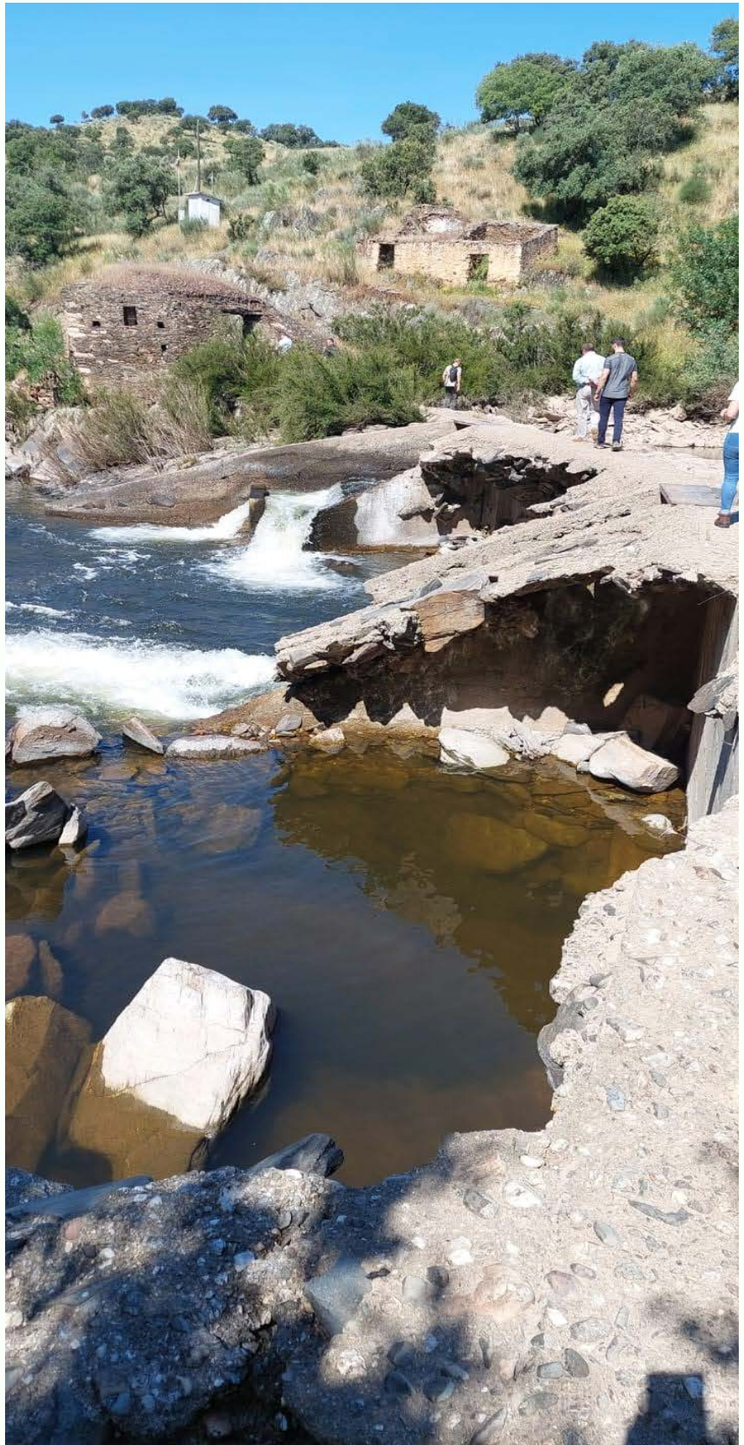
Adaptive Management

Continuous monitoring ensured interventions remained aligned with goals.



6. Key Message

> "Restoring river ecosystems through local partnerships and adaptive, nature-based approaches not only revives biodiversity, but builds resilient landscapes and communities across borders."



Contact and Further Information

Coordinating Beneficiary

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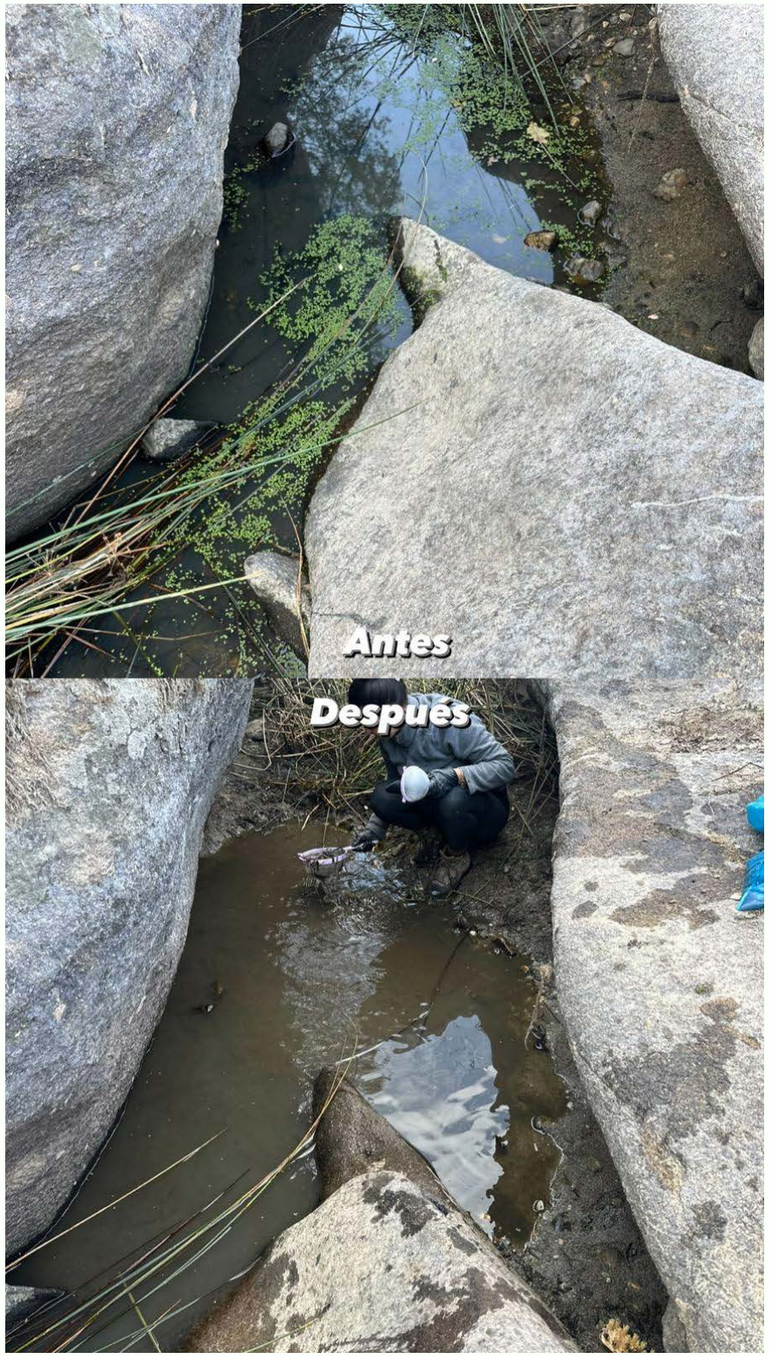
Project Website: https://lifealnustaejo.eu/

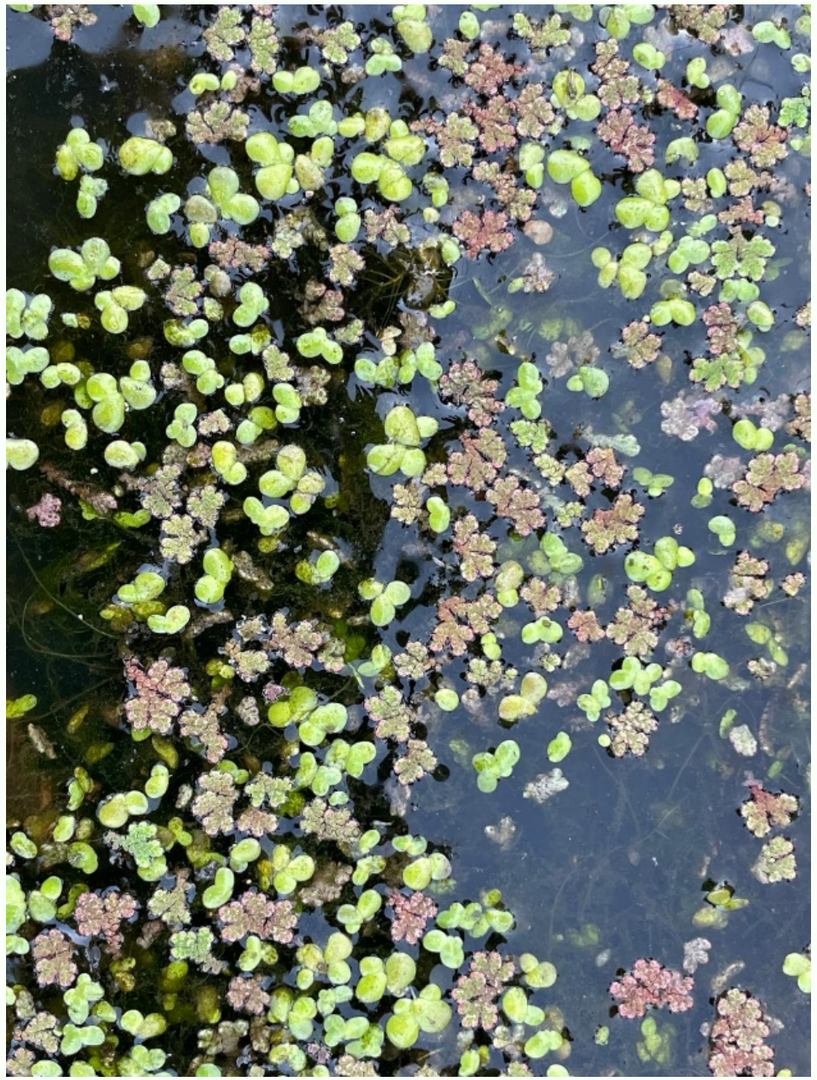
Thank you for your attention!

Samples collection

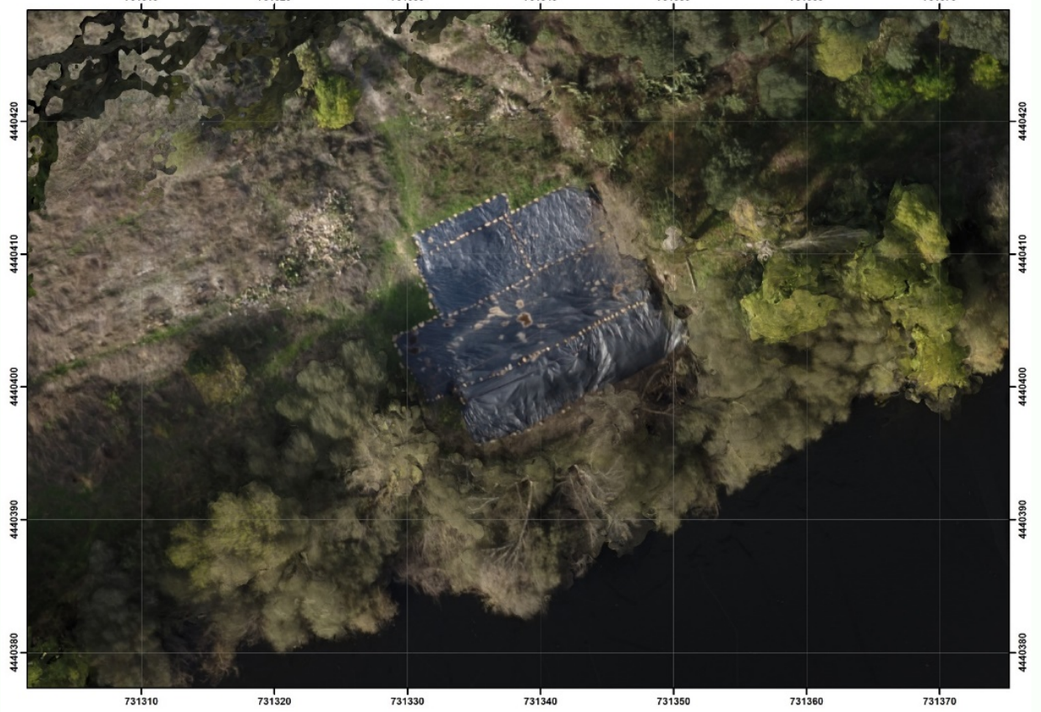
Phytophthora alni

Cleaning Azolla filiculoides





Blanket for Arundo Donax (Dron images)



Debarking_Acacia dealbata

ANTES

DEPOIS

ZEC Gardunha, Fundão

Execução de trabalhos de controlo de espécies invasoras (descasque)

LIFE ALNUS TAEJO
CONSERVATION AND RESTORATION OF MEDITERRANEAN ALDER FORESTS PRIORITY HABITAT IN WESTERN INTERNATIONAL TAJO RIVER BASIN
LIFE20 NAT/ES/000021

In situ nursery

nursery (ECOSALIX)

Planting

Miscellanies