Bio Ilhas Project: Blending Research with scientific and educational dissemination

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Introduction

Nature-based solutions (NBS) are defined by their ability to recreate natural processes in an urban environment [1]. An example of such infrastructure is floating islands, which replicate ecosystem processes and services, promoting mitigation of anthropogenic impacts and biodiversity conservation. It can also be an educational resource to promote knowledge of the species associated with aquatic ecosystems [2].

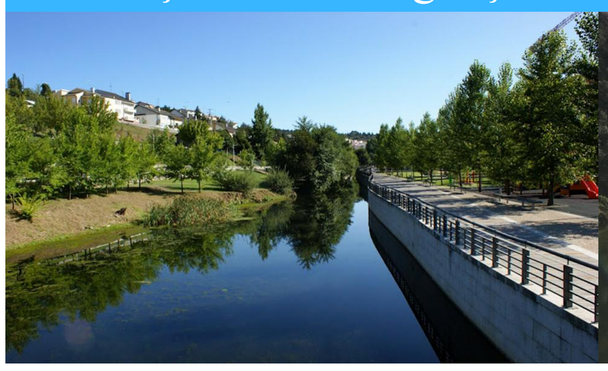
Objectives

- Implement four floating islands to improve the ecological integrity of aquatic systems.
- Use different materials to compare their durability
- Investigate the development of biofilm and the growth of aquatic plants to compare the biodiversity of aquatic organisms.

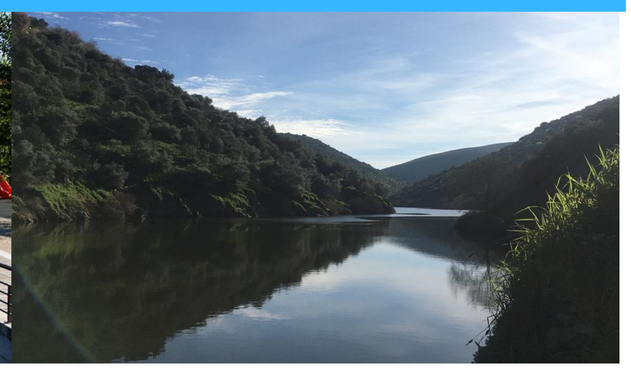
Materials and Methods

In this study, two floating islands will be implemented in the urban core of Fervença river and two in the lentic area influenced by the Côa river coffer dam. Both river areas are affected by human activity at different levels.

Fervença river - Bragança



Côa river – V. N. de Foz-Côa



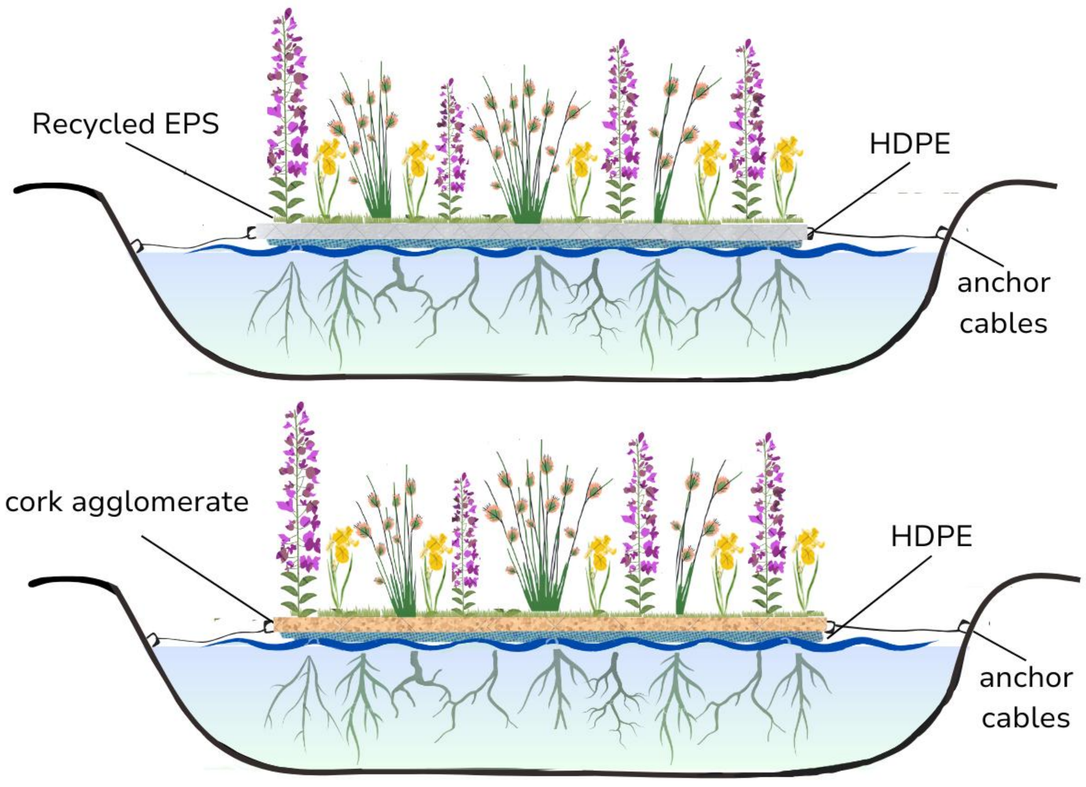
3 species of plants were selected to compose the bio-islands:

Lythrum salicaria

Juncus effusus

Iris pseudacorus

2 types of materials will be used to build them: (i) a cork agglomerate structure and (ii) recycled EPS (expanded polystyrene). **2** islands with different types of materials will be installed in each river.



Anchoring will be performed using double-braided polyester cables, fixed to the riverbanks.

Expected Results

1. Provide scientific data for monitoring the aquatic environment and increase the environmental and scientific literacy of society in general;
2. Support nature-based solutions to restore habitats and promote biodiversity;
3. Disseminate international best practices, creating local and regional momentum for water management and climate change mitigation and adaptation.

References

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