

Different Materials, Different Invaders? Monitoring Methodologies for Marine Non-Indigenous Fouling Species

Ana Beatriz Mota

Orientadores: Paula Chainho^{2,1}, Nuno Castro²

¹ FCUL - Faculdade de Ciências da Universidade de Lisboa (PT), ² MARE - Centro de Ciências do Mar e do Ambiente (PT)

Summary

Marine non-indigenous species (NIS) are a major threat to biodiversity, ecosystem functioning, and may also have economic and public health impacts. Artificial structures, such as recreational marinas, facilitate their introduction and spread. Monitoring is essential for effective management; however, the methods used can influence the results. The use of standardized monitoring methodologies is therefore crucial, as it allows comparisons across different spatial scales (local, regional, and global). This study compares colonization on different artificial substrates (PVC and correx) in Alcântara Marina.

Objectives

- Compare biofouling colonization on PVC and correx panels
- Identify non-indigenous species (NIS)
- Determine which panel type is more effective for monitoring NIS
- Relate biological patterns with environmental parameters

Preliminary Results

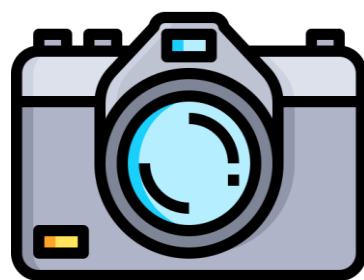
- A total of 21 species were recorded across all samples
- Several non-indigenous species (NIS) were identified
- Differences in species composition were observed between PVC and correx panels
- Higher species richness was observed on PVC panels
- Substrate type influences community structure

Tasks

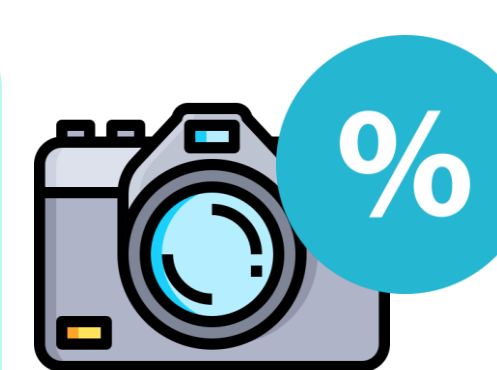
Task 1-Deployment of PVC (SERC) and correx panels



Task 2-Monthly sampling of fouling communities



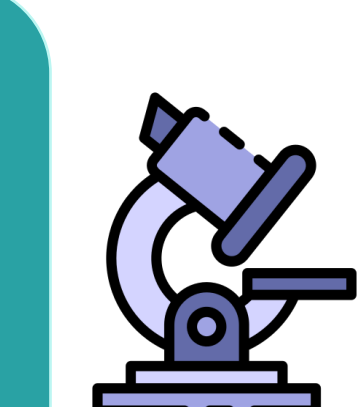
Task 3- Photographic analysis and percentage cover estimation using CPCe software



Task 4- Taxonomic identification of species (laboratory analysis; WoRMS database)



Task 5- Measurement of environmental parameters (temperature, salinity, dissolved oxygen)



Task 6- Multivariate and univariate statistical analyses

