

Field Trip Cascais Bay

TP Phytoplankton Biology

9 October 2025

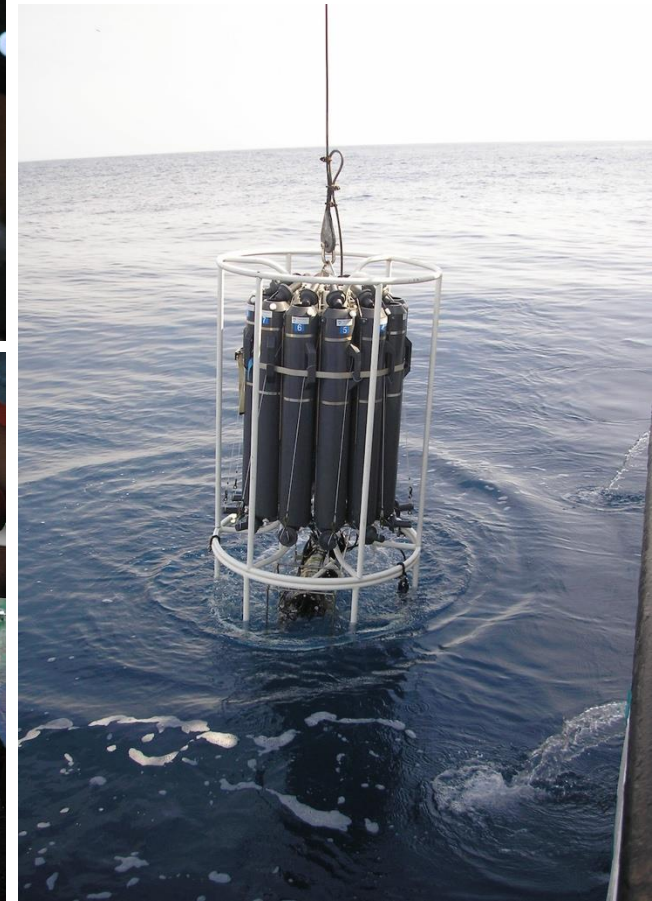
Objectives:

Phytoplankton sampling

- Qualitative:
 - Phytoplankton net (10 μ m or 20 μ m)
- Quantitative:
 - Sampling bottle (Niskin, Van Dohrn)

Microphytobenthos sampling

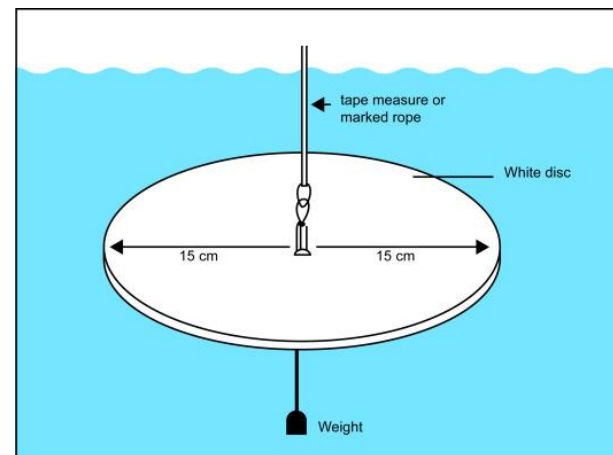
- Natural substrates - macroalgae



Objectives

Environmental data

- Temperature and salinity
 - Imersion thermometer ($\pm 0,1^{\circ}\text{C}$)
 - Salinity estimation with refractometer
 - Multiparametric probe
- Light attenuation
 - Secchi disc
 - Multiparametric probe



Sampling site: Cascais Bay (marina)



Tide hours and height 09/10/2025 check:

<https://www.hidrografico.pt/m.mare>

The screenshot shows a web browser window with the URL <https://www.hidrografico.pt>. The website has a blue header with navigation links: Home, IH, Products, Services, Activities, Assets, Data, Techinfo, Gallery, Sailor's shop, and Hidrográfico. Below the header, there are three tabs: Kitesurf, Harbour Entrance, and Costa da Caparica Beach. The main content area shows the breadcrumb "Products / Forecasts / Tides (Table)" and the title "TIDAL FORECAST".

Below the title, there are four input fields for the forecast parameters:

- País *:** Portugal - Continental
- Porto *:** Cascais
- Data:** 2025-10-09
- Quantos dias:** 1

Below the input fields, there is a table with the following data:

Date and hour	Height	Phenomena
2025-10-09 04:24	3.7 m	High tide
2025-10-09 10:29	0.5 m	Low tide
2025-10-09 16:47	3.7 m	High tide
2025-10-09 22:51	0.6 m	Low tide

Below the table, there is a note: "Summer legal hour fuse «Europe/Lisbon» (UTC/GMT+1)".

What to take?

- Field book
- Pencil – resists water
- Shoes and outfit according to the weather and exposure to sea water
- Field handout (to be uploaded in Fenix)

Referênciass

Reguera, B., R. Alonso, A. Moreira, S. Méndez, and M.-Y. Dechraoui-Bottein (Eds). 2016. Guide for Designing and Implementing a Plan to Monitor Toxin-Producing Microalgae. 2nd Ed. Intergovernmental Oceanographic Commission (IOC) of UNESCO and International Atomic Energy Agency (IAEA), Paris and Vienna. IOC Manuals and Guides, nº 59. 66pp. Disponível (Fenix) and e online (também em espanhol): https://unesdoc.unesco.org/ark:/48223/pf0000214510_eng.locale=en