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Orientation: Ocean observation and Global change
Specialization Area: Global Change
Research Area: 1.10 Impact on Biodiversity



PhD project: **Biotic multipliers of global change: herbivory pressure on kelp forests**

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Summary: Global change is tropicalizing temperate ecosystems. Its drivers are many, but it is increasingly perceived that they go beyond a simple physiological effect of warming. Warming also alters species interactions, and its consequences are sometimes magnified along the trophic chain. In marine ecosystems, the rocky reefs of temperate latitudes are characterized by an abundance of habitat-forming algae, mainly large brown seaweed (kelps). Kelp forests are essential for maintaining a high biodiversity, but their abundance has recently declined across the world. Among the various disturbances altering kelp forests, recent studies elsewhere detected that global change sometimes enhances herbivory pressure. The importance of these processes for the kelp forest of Northwest Atlantic remains unassessed. Nonetheless, it still suggests that the herbivore pressure on Iberian kelps may have increased in recent years. Observations suggest that herbivory may have played a role in the recent retreat of kelp forests detected on our coasts, but its actual relevance remains unassessed. In this project, I aim to (a) evaluate the impact of herbivory on kelp forests of the Iberian Atlantic, (b) identify the main consuming species, and (c) compare the vulnerability of kelps with other native laminar algae. The project will provide a scientific basis to assess the actual risk of herbivory for the future of the Atlantic's kelp forests and to delineate adaptive management actions.

