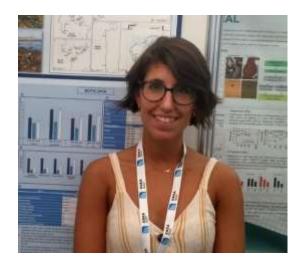


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Orientation: Ocean Observation and Global Change Specialization Area: Global Change Research Area: 1.10 Impact on biodiversity

PhD project: Biotic multipliers of global change: Herbivory pressure on kelp forest

Supervisors: Dr. Rodolfo Barreiro Lozano (Universidade da Coruña) Dra. María Cristina Piñeiro Corbeira (Universidade da Coruña)

Summary: Global and local effects of the anthropogenic pressure are leading to changes in the abundance and distribution of dominant seaweeds in temperate rocky shores worldwide. For example, the decline of kelps, large brown seaweeds that form ecologically and economically important forest, has been reported in recent years in some regions due to effects linked to climate change. Indirect climate change effects include alterations of plantherbivore interactions, such as the introduction of non-native herbivorous fish, whose role in temperate areas was irrelevant in the past. In northwest (NW) Spain, there is little knowledge of the current conservation status of kelp. Therefore, in this thesis, changes in common seaweeds were evaluated, with special emphasis on kelp reefs. In Chapter I, the frequency and distribution of 33 common perennial seaweeds in NW Spain were compared with data collected 4 and 20 years earlier, to differentiate genuine trends from transient fluctuations. Chapter II and III focused on the conservation status of Laminaria ochroleuca kelp forests and the reasons for their recent decline. Finally, Chapter IV was conducted on the Australian west coast, a relevant area for investigating herbivory pressure linked to climate change on kelp forests.