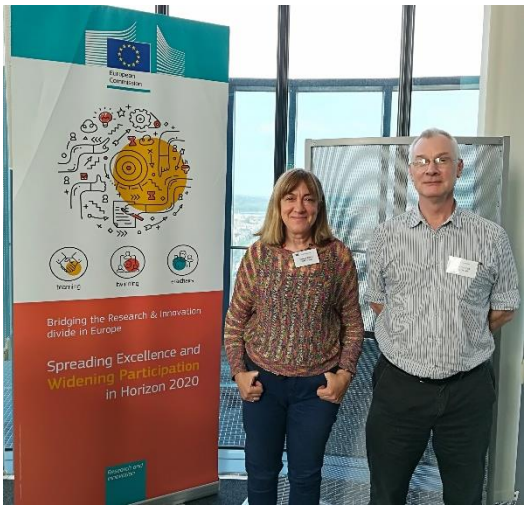
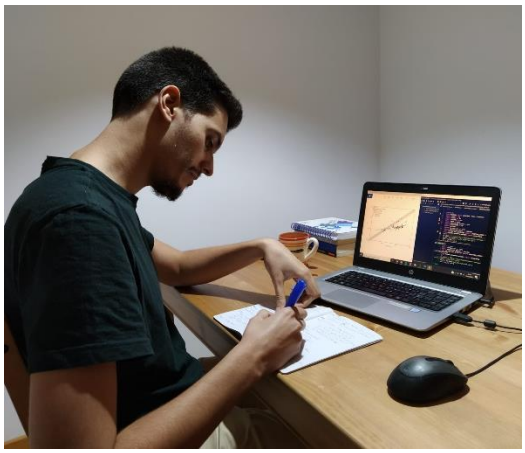
PORTWIMS

Your quarterly bite of Project News – July 2020



Message from the Project Coordinator

I am happy to report that the first project review by our funders, the European Commission, has been successful. This paves the way for further collaboration and training over the next two years. While normal PORTWIMS activity has been affected by the present pandemic, I am delighted to say that our team have used the time productively to discuss scientific results of ongoing work, write and submit papers. Planned staff exchanges and training have been postponed or made virtual and the Innovation Summer School, planned for June 2020 linked with the Lisbon United Nations Ocean Conference, is postponed to May/June 2021.



Our First Virtual Staff Exchange

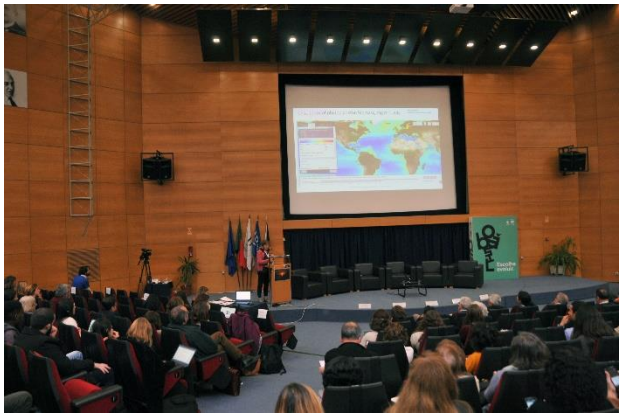
Even amidst a pandemic, exchanges between Lisbon University and PML are continuing. In May/June, PhD student Afonso Ferreira worked remotely with PML's ocean colour scientist Thomas Jackson in evaluating and improving remote sensing chlorophyll a algorithms for the Southern Ocean. The main goal being to support and improve Earth Observation in Antarctic waters, a decades-long challenge. This partnership will be instrumental towards Afonso's PhD work plan, demonstrating how PORTWIMS continues to support early career researchers.

Msc Student continues PORTWIMS Research

Lisbon University student Alice Santos is continuing her PORTWIMS journey with her latest efforts focused on characterising, quantifying and mapping ecosystem services provided by marine invertebrates in Maputo bay, Mozambique. Alice benefited from a staff exchange to PML in 2019 and attended the Ecosystem Services summer school in early 2020. Her latest analysis will be used to refine the conceptual model initiated during the summer school in collaboration with Stefanie Broszeit (PML) and Alexandra Marçal Correia (FCUL).

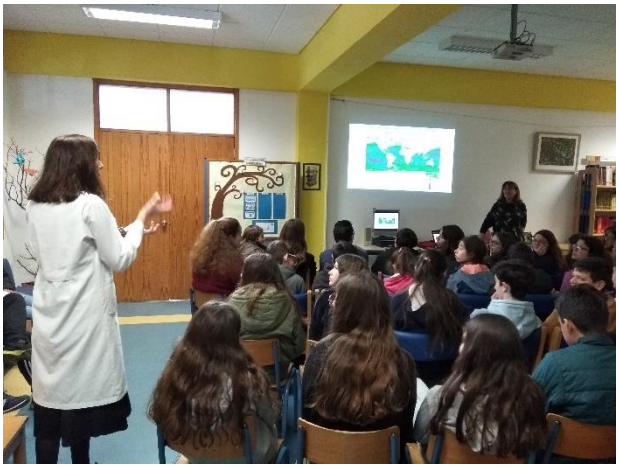
More Virtual Collaborations Planned

Fellow student Marta Bento, a PhD student at FCUL, was scheduled to visit PML this summer but due to the COVID-19 pandemic her collaboration will take place online. Marta, is addressing biodiversity, distribution, and functional aspects of marine invertebrates within ecosystem functioning in Mozambique and the Democratic Republic of São Tomé and Príncipe. She will conduct an in-depth assessment of the ecosystem services provided by marine invertebrates in the two countries and an analysis of specific related issues through the development of conceptual models.



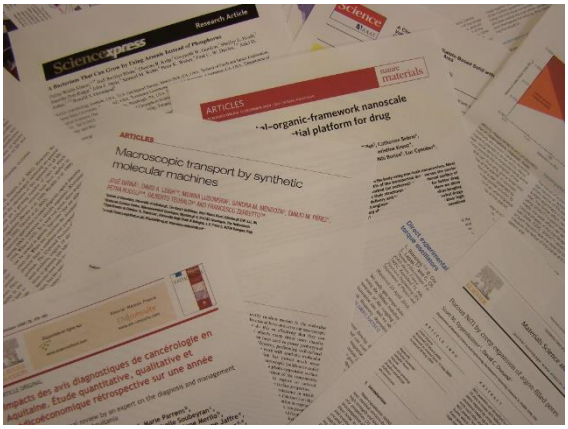
Sharing PORTWIMS News

Before Covid-19 restrictions were put in place PORTWIMS was presented at two prestigious events. Firstly at the Portuguese National Meeting on Climate Change Research in February 2020 where Vanda gave a presentation on the 'Use of the Colour of the Sea to Observe the Ocean'. Secondly, at the Space, Coastal Zones and Territorial Monitoring: Responding to Climate Emergency conference in March 2020, where Vanda provided a presentation on the 'Use of Ocean Color Detection in monitoring Coastal and Estuarine areas.



PORTWIMS School Visit

Part of the PORTWIMS mission is to increase Ocean Literacy and one of the ways we do this is through school visits to raise awareness of the importance of the ocean and what we can learn from it. In March 2020 Vanda visited Pontével School and provided an interactive presentation on 'What is Phytoplankton and what is the color of the sea seen by satellites'. The students were very engaged and interested, particularly in the satellite imagery and what we can tell from the different colours about the health of the ocean.



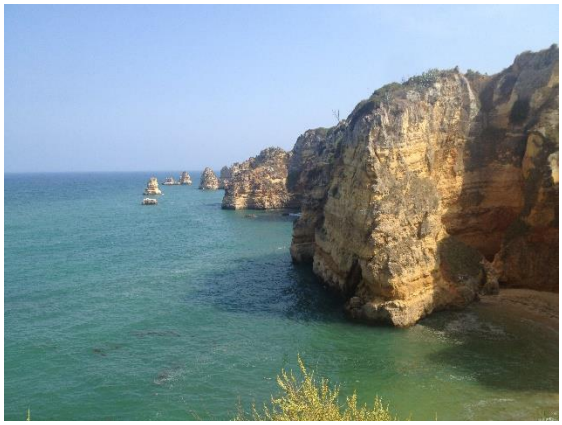
New PORTWIMS Publications

Another aim of PORTWIMS is to ensure that publications from the science faculty of Lisbon University can be made open access to increase readership and awareness of the group's research capabilities with external scientists and institutions. We are delighted to have funded several publications over the last few months, two of which have now been accepted and will soon be published, a summary of which can be found below with more detailed information available on the project website.

Any students from the group may apply for gold access funding by contacting Vanda Brotas.

1. New Understanding of Sea Urchin Adhesives

Sea urchins have hundreds of specialized adhesive organs, the tube feet, which play a key role in locomotion, substrate attachment and food capture. Several studies have been carried out to characterize the adhesives used, and it has been shown that it is composed by proteins and glycans. Our results show that five lectins label exclusively the disc adhesive epidermis and simultaneously the secreted adhesive, being therefore most likely relevant for sea urchin adhesion (read more...).



2. Characterizing Phytoplankton Biomass Seasonal Cycles in Two Coastal Bays

The seasonal and interannual variability of chlorophyll a was studied between 2008 and 2016 in two coastal bays located in the northeastern limit of the Iberia/Canary upwelling ecosystem, aiming to understand if small latitudinal distances and/or coastline orientation can promote different chlorophyll a seasonal cycles and if different meteorological and oceanographic variables can explain the differences observed on seasonal cycles.

PORTWIMS on Social Media

For more frequent project news please follow us on Facebook and Twitter.

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