

OceanSchool 2nd Winter School

The 2nd Winter School to be held at Nova SBE from February 26th to March 1st, 2024, as part of the OceanSchool project, will cover some of the most relevant issues concerning ocean management today. The winter school will consist of lectures where leading researchers will share their expertise on areas related to (i) the role of marine coastal services in developing countries, (ii) the use of spatially explicit policy instruments to manage ocean waters, such as MPAs and OECMs and their role achieving the ambitious 30x30 target a combination of different types of conservation instruments, and (iii) the role of Antarctica in regulating the earth ecosystems and the challenges to international marine policy in managing that area, and (iv) the role of socioeconomic indicators in ocean waters' quality monitoring. Below, a brief description of each of those topics is provided. In addition to the lectures which topics are presented below, students participating in the 2nd winter school also can enroll in an introductory course on Geographic Information Systems (GIS), endowing students with the basic tools to deal with spatially explicit data.

Agenda

Monday, February 26th

2.00 pm – 6.00 pm – Room D-115

Marine Coastal Ecosystems and Development

Prof. Alex Armand, Nova School of Business and Economics

Populations in developing countries depend critically on the goods and services provided by natural ecosystems. Guaranteeing the good condition of those natural ecosystems is, therefore, critical. Today, an important threat to marine ecosystems in those areas of the globe is the overexploitation of fish stocks, illegal and unregulated fisheries. Also, the stress that those ecosystems suffer due to agricultural runoff pollution causing eutrophication, and industrial effluents, significantly reduces the water quality, resulting in very detrimental consequences on the health condition of those populations. In particular, recent research revealed the very negative consequences on infants' health, as they get contaminated through their mothers. The consequences of these elevated pollution levels are felt not only at very early ages but typically persist putting at risk their future

development, reflected in poorer educational performance with negative consequences on labor markets. In face of this degradation and the incapacity of the local authorities, either governmental or others, to overcome those problems, the populations end up migrating to richer areas of the world for survival. So, the degradation of natural ecosystems in those regions is a very important force that drives waves of migration of those populations. Moreover, climate change also contributes to aggravating those already so precarious circumstances.

Tuesday, February 27th

10.00 am – 11.30 am – Room D-115

The Role of Socioeconomic Indicators in Ocean Waters´ Quality Monitoring Conceição Santos, Portuguese Institute for Sea and Atmosphere

The ocean role on earth system and the importance of marine waters quality is known by the research community for a long-time and it is today a hot topic, considering all the threats that the ocean is facing. Nevertheless, just recently the role of socioeconomic indicators is being analysed in parallel and combination with marine waters quality indicators. A more integrated approach and more balanced proposals to decision making support are supposed to be produced. The presentation will go through the policies and the indicators systems today in place and those being developed to guarantee a monitoring that consider quality indicators and socioeconomic indicators.

2.00 pm – 6.00 pm – Room B135

Geographic Information Systems as tools for ocean management Zara Teixeira, University of Coimbra

Management of ocean waters relies deeply on understanding the spatial distribution of ocean resources and activities. Integrating such geographic data relies on spatially explicit tools that can address the complex and interconnected nature of marine ecosystems. Geographic Information Systems (GIS) are powerful tools that allow users to capture, store, analyze, and visualize geographic data. GIS combines various types of data—such as maps, satellite imagery, and statistical data—and enables users to understand patterns, relationships, and trends associated with specific locations. GIS are thus valuable tools to support decision-making processes for effective ocean management, namely in processes such as Marine Spatial Planning (MSP), Zoning and Designation of Marine Protected Areas (MPAs), Integrated Coastal Zone Management (ICZM), Dynamic and Climate-responsive Ocean Management, Shipping and Navigation Optimization and Tourism and Recreation assistance.



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Basic knowledge of how to handle and understand geographic data allows making informed decisions and addressing the challenges associated with the responsible use and management of marine resources.

Wednesday, February 28th

2.00 pm – 6.00 pm - Room D-115

Conservation of marine ecosystems and biodiversity

Maria Adelaide Ferreira, University of Lisbon

Marine protected areas (MPAs) and other effective area-based conservation measures (OECMs) are crucially important instruments for marine biodiversity conservation. Both types of instruments are at the core of the famous 30x30 target, which aims to ensure that at least 30% of the world's marine and coastal areas, especially those most important for biodiversity and marine ecosystems services and functions, are effectively conserved and managed by 2030. A definition of OECMs was adopted at the fourteenth meeting of the COP of the UN Convention on Biological Diversity (CBD) as areas that provide equivalent conservation benefits to protected areas but are not managed primarily for the conservation of nature. Like MPAs, OECMs can be governed by private individuals or organizations, including Indigenous Peoples and Local communities (IPLCs) or governments. Furthermore, OECMs can contribute to mainstream conservation actions into sectors of maritime activity not typically associated with biodiversity protection, such as fisheries and shipping.

Achieving the ambitious 30x30 target will require a combination of both types of conservation instruments (MPAs and OECMs), yet many key stakeholders, including governments, and maritime organisations, are still not fully aware of the potential and relevance of OECMs to the multiple global multilateral commitments.

Thursday, February 29th

2.00 pm – 6.00 pm – Room D-115

The Role of Antarctica

Prof. José Xavier, University of Coimbra

Recent scientific research has shown how relevant Antarctica and the Southern Ocean influence is on sea level, climate, and marine ecosystems, with very important consequences for the future of Earth and humanity. By how much and at what rate the sea level rises in the future depends on how the Antarctic Ice Sheet responds to warming of the atmosphere and ocean. Therefore, the future of humanity is intimately related to the fate of that region, which also raises important challenges as any global public good.

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In fact, from a policy perspective, “...Antarctica and the Southern Ocean are among the largest shared spaces on Earth, regulated by the unique governance regime of the Antarctic Treaty System, and embedded within and connected to broader global decision-making.”

Therefore, for all these reasons, it is very important to find ways of intervening to revert those circumstances and thus improve the welfare of local populations worldwide. This requires understanding the mechanisms that have led to those negative outcomes to better inform sustainable public policy decision-making which may then be used to find the most appropriate regulatory context that provides the incentives to overcome them. To face this problem sustainable management policies must be developed, implemented, enforced, and monitored, which requires access to data based on which the most appropriate methodologies can be chosen.

Friday, March 1st

2.00 pm – 4.30 pm – Room D-115

Lab Classes

Maria Antonieta Cunha e Sá, Nova School of Business and Economics