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**Ano Letivo** 2022-23

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**Unidade Curricular** CONSERVAÇÃO MARINHA

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**Cursos** BIODIVERSIDADE, PESCAS E CONSERVAÇÃO MARINHA (2.º Ciclo) (\*)

(\*) Curso onde a unidade curricular é opcional

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**Unidade Orgânica** Faculdade de Ciências e Tecnologia

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**Código da Unidade Curricular** 19331005

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**Área Científica** CIÊNCIAS DO AMBIENTE

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**Sigla**

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**Código CNAEF (3 dígitos)** 422

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**Contributo para os Objetivos de  
Desenvolvimento Sustentável -  
ODS (Indicar até 3 objetivos)**

13

14

15

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**Línguas de Aprendizagem**

Inglês

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**Modalidade de ensino**

Presencial

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**Docente Responsável**

Karim Erzini

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DOCENTE	TIPO DE AULA	TURMAS	TOTAL HORAS DE CONTACTO (*)
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\* Para turmas lecionadas conjuntamente, apenas é contabilizada a carga horária de uma delas.

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ANO	PERÍODO DE FUNCIONAMENTO*	HORAS DE CONTACTO	HORAS TOTAIS DE TRABALHO	ECTS
1º	S1	10T; 6TP; 10TC; 2S; 4OT	78	3

\* A-Anual;S-Semestral;Q-Quadrimestral;T-Trimestral

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**Precedências**

Sem precedências

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**Conhecimentos Prévios recomendados**

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### Objetivos de aprendizagem (conhecimentos, aptidões e competências)

Conservação do oceano através de áreas marinhas protegidas (AMPs); Definição de AMPs, tipos de AMPs e passos para a sua implementação; Eficiência de AMPs; Ciência relacionada com AMPs e redes de AMPs. Integração das componentes sociais, económicas e ecológicas das AMPs.

Os estudantes deverão: aprender o que são AMPs, os diferentes tipos e como têm sido usadas; compreender porque as AMPs são defendidas por acordos internacionais; aprender os critérios e princípios orientadores para a seleção, desenho e gestão de AMPs; compreender o conceito de conectividade e a sua importância para o desenho de redes de AMPs; compreender o papel das AMPs no contexto global de gestão do oceano.

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### Conteúdos programáticos

1. O que são áreas marinhas protegidas (AMPs)? Tipos e definições de AMPs
2. Seleção de AMPs  
Princípios orientadores e critérios para a seleção e desenho de AMPs. Planos de gestão de AMPs
3. Redes de AMPs
4. Monitorização, indicadores e objetivos de longo-prazo
5. Eficiência de AMPs, ciência das AMPs
6. Acordos internacionais para AMPs e situação atual
7. Futuro da conservação do oceano e do desenvolvimento sustentável

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### Metodologias de ensino (avaliação incluída)

Os tópicos teóricos serão apresentados em aulas e seminários (as aulas teóricas deverão também incluir apresentações pelos alunos); alguns exercícios teórico-práticos ajudarão a aprofundar alguns conceitos específicos sobre AMPs; a cadeira irá incluir uma visita a um parque marinho. A avaliação será através de apresentações feitas pelos alunos e/ou trabalho final/relatório de grupo e de um exame final.

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### Bibliografia principal

Exemplos:

Açlvarez-Fernandez et al. (2017). The management performance of marine protected areas in the North-east Atlantic Ocean. *Marine Policy* 76: 159-168.

Claudet et al. (2010). Marine reserves: Fish life history and ecological traits matter. *Ecological Applications* 20(3): 830-839.

Gaines et al. (2010) Designing marine reserve networks for both conservation and fisheries management. *Proc Natl Acad Sci USA* 107, 18286-18293.

Gerber et al. (2005). A theory for optimal monitoring of marine reserves. *Ecol. Lett.* 8, 829-837.

Gorud-Colvert et al. (2014). Marine Protected Area Networks: Assessing Whether the Whole Is Greater than the Sum of Its Parts. *PLOS ONE* 9, e102298.

Spalding et al. (2016). Building towards the marine conservation end-game: consolidating the role of MPAs in a future ocean. *Aquat. Conserv.: Mar. Freshwat. Ecosyst* 26, 185-199.

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**Academic Year** 2022-23

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**Course unit**

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**Courses** Marine, Biodiversity, Fisheries and Conservation (\*)

(\*) Optional course unit for this course

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**Faculty / School** FACULTY OF SCIENCES AND TECHNOLOGY

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**Main Scientific Area** CIÊNCIAS DO AMBIENTE

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**Acronym**

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**CNAEF code (3 digits)** 422

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**Contribution to Sustainable  
Development Goals - SGD  
(Designate up to 3 objectives)** 13  
14  
15

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**Language of instruction** English

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**Teaching/Learning modality**

Presential

**Coordinating teacher**

Karim Erzini

Teaching staff	Type	Classes	Hours (*)
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\* For classes taught jointly, it is only accounted the workload of one.

**Contact hours**

T	TP	PL	TC	S	E	OT	O	Total
10	6	0	10	2	0	4	0	78

T - Theoretical; TP - Theoretical and practical ; PL - Practical and laboratorial; TC - Field Work; S - Seminar; E - Training; OT - Tutorial; O - Other

**Pre-requisites**

no pre-requisites

**Prior knowledge and skills**

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**The students intended learning outcomes (knowledge, skills and competences)**

Ocean conservation through marine protected areas (MPAs); Definition of MPAs, types of MPAs and steps for their implementation; Effectiveness of MPAs; Science of MPAs and networks of MPAs. Integrating social, economic and ecological aspects of marine protected areas.

Students are expected to: learn what are marine protected areas, the different types and how have they been used; understand why MPAs have been advocated by global agreements; learn the main guiding principles and criteria for selection, design and management of marine protected areas; understand the concept of connectivity and its central importance for the design of networks of marine protected areas; understand the role of marine protected areas in the context of global ocean management.

## Syllabus

1. What are marine protected areas (MPAs)? Types and definitions of MPAs
  2. Selection of marine protected areas  
Guiding principles and criteria for the selection and design of MPAs. Management plans for MPAs
  3. Networks of marine protected areas
  4. Monitoring procedures, indicators and long-term objectives
  5. Effectiveness of MPAs, science of MPAs
  6. Global agreements for MPAs and the current situation
  7. Future prospects for ocean conservation and sustainable development
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## Teaching methodologies (including evaluation)

Theoretical topics will be presented in lectures and seminars (theoretical lectures will include students talks); some theoretical-practical exercises will help to improve some specific concepts related to MPAs; the course will also include a visit to a marine park. Evaluation will be by students' presentations and/or a group report and a written exam.

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## Main Bibliography

Examples:

Álvarez-Fernández et al. (2017). The management performance of marine protected areas in the North-east Atlantic Ocean. *Marine Policy* 76: 159-168.

Claudet et al. (2010). Marine reserves: Fish life history and ecological traits matter. *Ecological Applications* 20(3): 830-839.

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Gerber et al. (2005). A theory for optimal monitoring of marine reserves. *Ecol. Lett.* 8, 829-837.

Grover-Colvert et al. (2014). Marine Protected Area Networks: Assessing Whether the Whole Is Greater than the Sum of Its Parts. *PLOS ONE* 9, e102298.

Spalding et al. (2016). Building towards the marine conservation end-game: consolidating the role of MPAs in a future ocean. *Aquat. Conserv.: Mar. Freshwat. Ecosyst* 26, 185-199.

Wells et al. (2016). Building the future of MPAs & lessons from history. *Aquat. Conserv.: Mar. Freshwat. Ecosyst* 26, 101-125.