

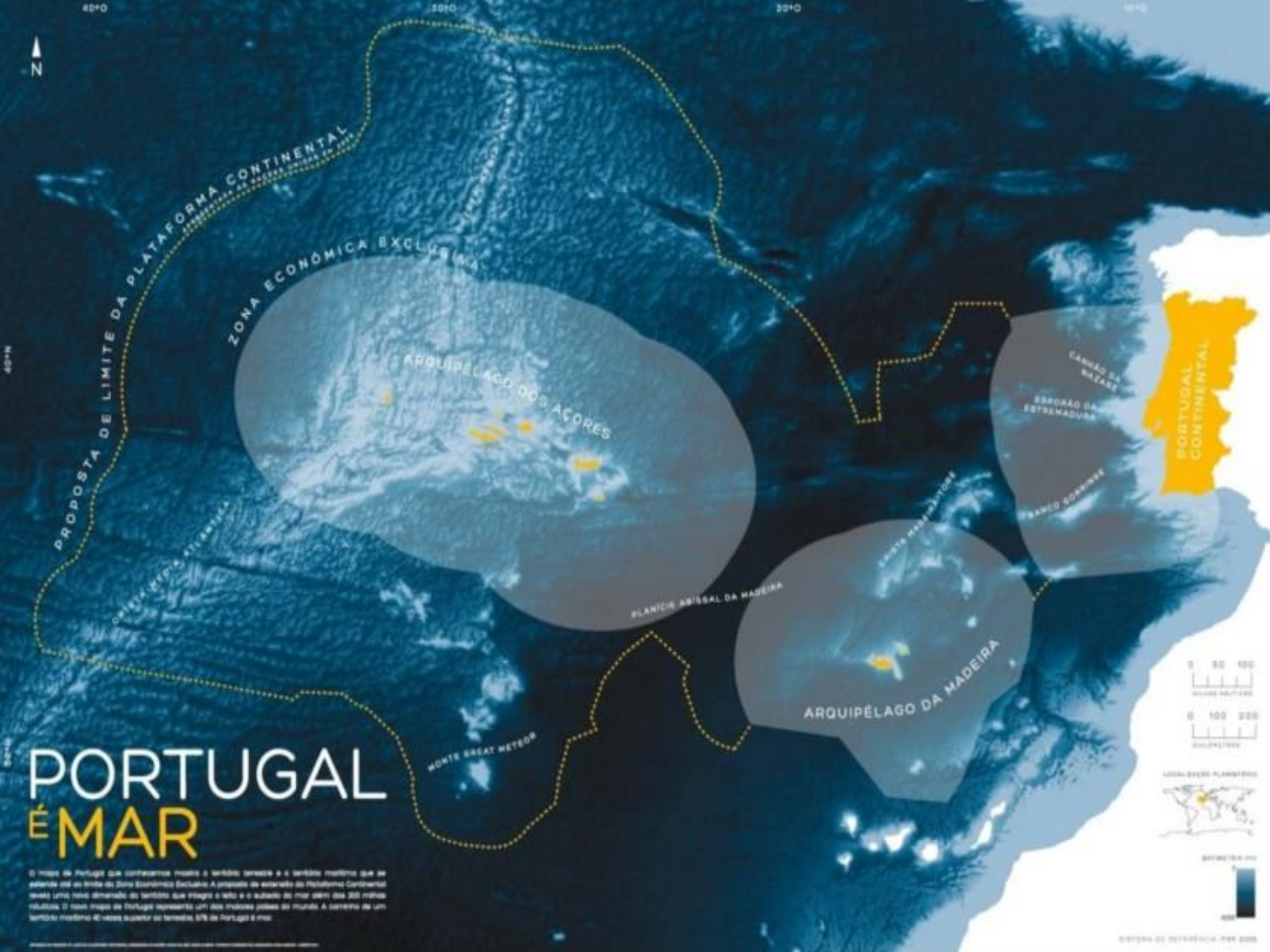
Agrupamento de Escolas Anselmo de Andrade  
Cluj-Napoca – Romania, 30th October 2019



# *The Diversity of the Portuguese Sea Life*

## Portugal

Erasmus+ KA229 School Exchange Partnership  
Short-Term Joint Staff-Training Event (C1)  
2019-1-RO01-KA229-063231\_4  
2019 - 2020



# PORTUGAL É MAR

O mapa de Portugal que conhecemos inclui o território terrestre e o território marítimo que se estende até ao limite da Zona Económica Exclusiva. A proposta de extensão da Plataforma Continental revela um novo dimensão do território que integra o leito e o subsolo do mar além dos 200 metros de profundidade. O novo mapa de Portugal representa um dos maiores países do mundo. A extensão de um território marítimo 40 vezes superior ao terrestre, 67% de Portugal é mar.

# The Constitution of the Portuguese territory

- **Land area:** mainland Portugal, archipelago of the Azores and archipelago of Madeira, with 92 391 km<sup>2</sup> km<sup>2</sup>;
- **Sea-zone,** over which Portugal exercises special territorial rights over the economic exploration and use of marine resources encircles an area of 1,727,408 km<sup>2</sup>

**Exercises special territorial rights over?**

**To whom belongs the sea? Or who owns the sea?**



# United Nations Convention on the Law of the Sea (UNCLOS ), 1982

Is the international agreement that defines **the rights and responsibilities of nations** with respect to their **use of the world's oceans**, establishing guidelines for businesses, the environment, and the management of marine natural resources, including energy production from water and wind.

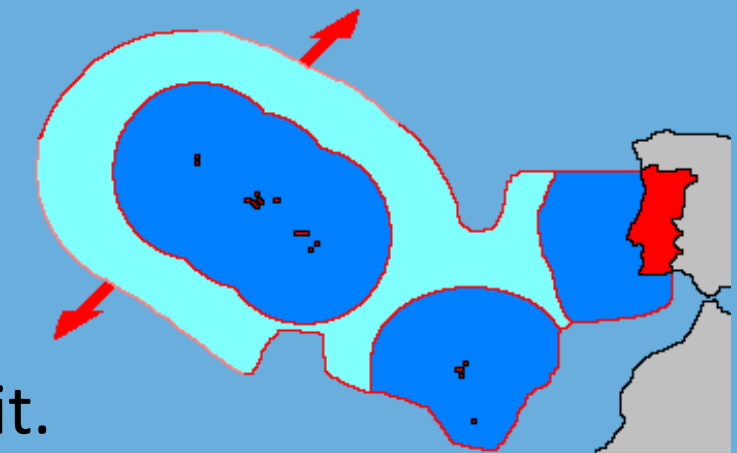





# Portugal's Maritime Borders

## Exclusive Economic Zone (ZEE)

It's the **coastal States' sovereign area** over airspace, the sea, the seabed and it's subsoil, up to a distance of 200 nautical miles (1 852 meters), from its coast.

A sea to care for;  
A sea to Protect;  
To watch over, and ensure the  
Safety of the navigators who cross it.



-  Portugal's Exclusive Economic Zone
-  Possible extensions in the Continental Shelf
-  Areas where research for possible extensions in the Continental Shelf will continue

**A sea rich in marine resources** with a wide variety and abundance of life: fish, marine mammals, crustaceans, molluscs, algae, corals, etc.

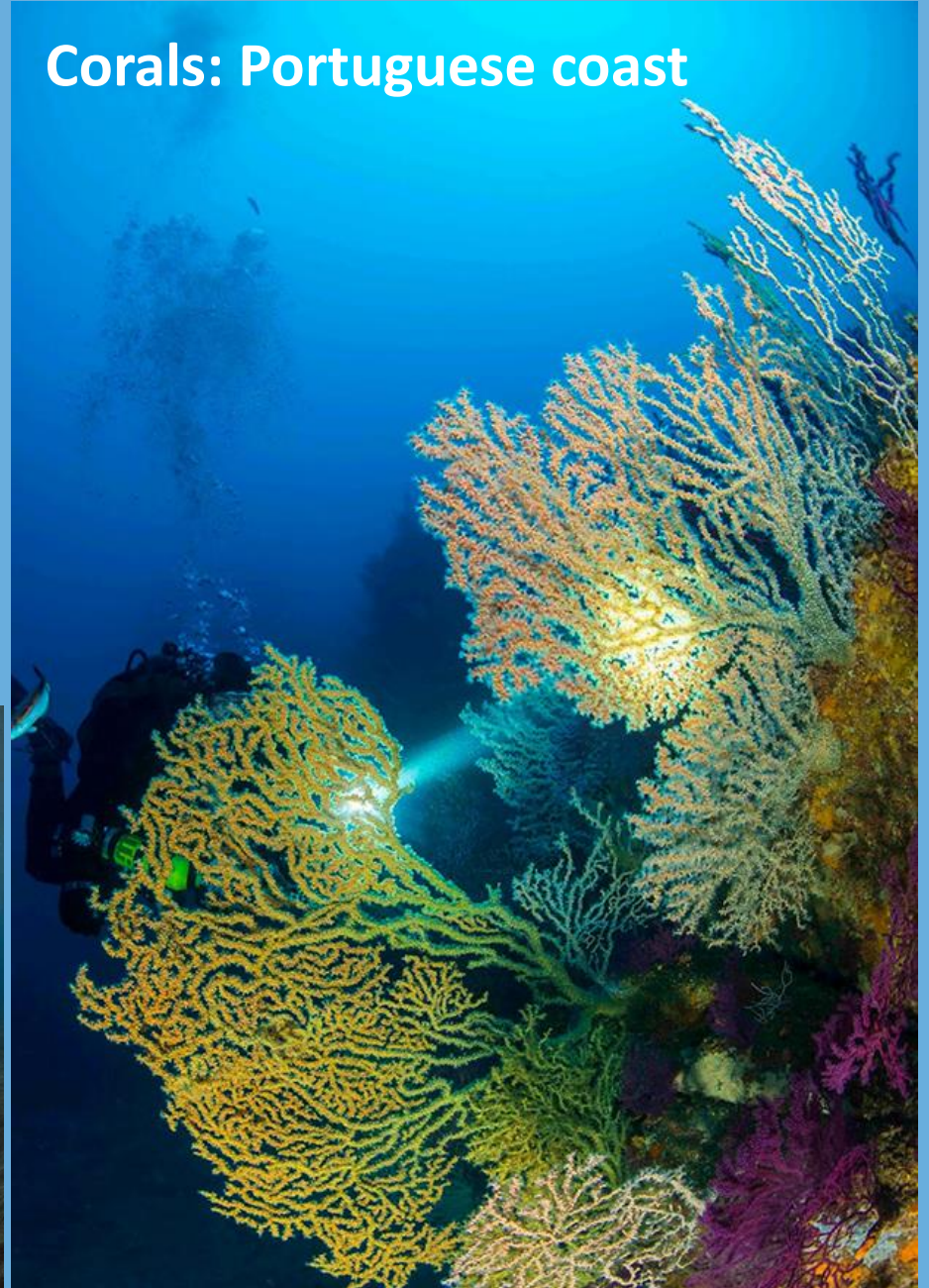


Grouper: madeira islands

**Shoal of sardines**



**Corals: Portuguese coast**

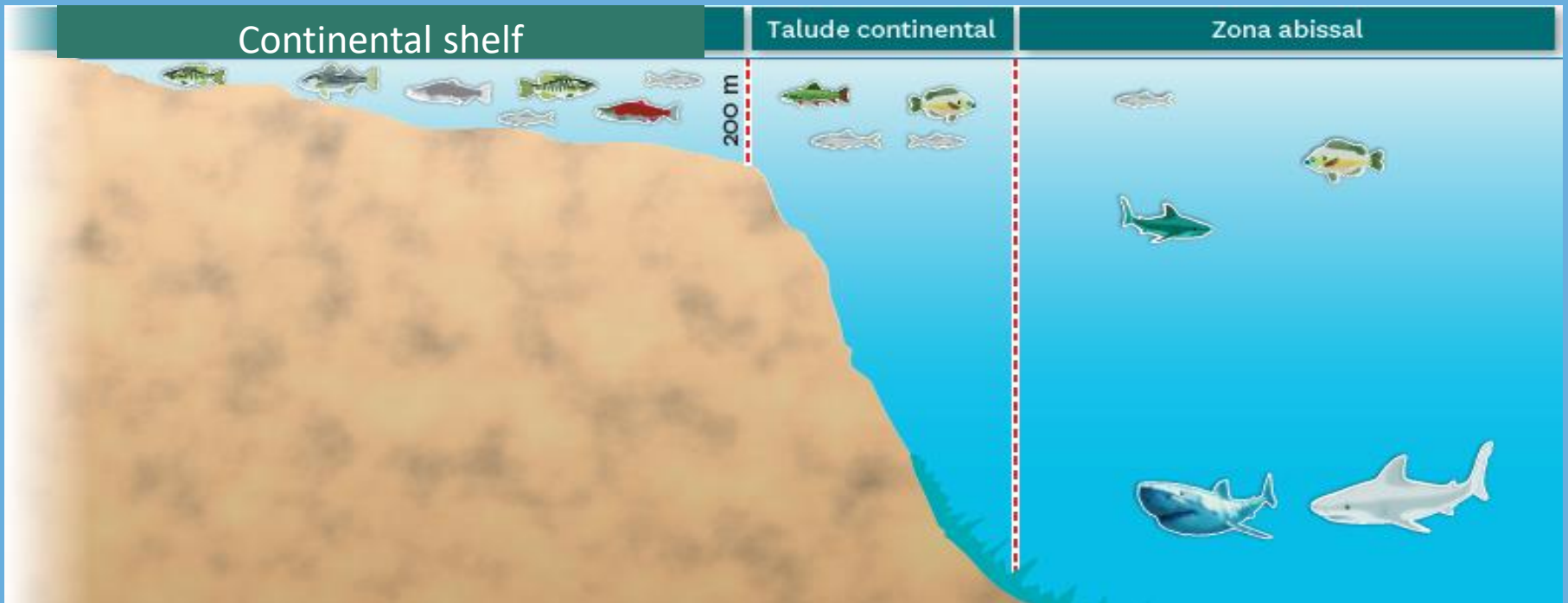


**Monk seal: desert islands  
Madeira**



What are the physical characteristics of **Atlantic seawater** that allow this abundance? and in what areas?

**The Continental Shelf:** is a shallow underwater platform (up to 200 meters deep)





**1.**  
**Depth;**  
**Luminosity;**  
**Water oxygenation;**  
**Temperature;**  
**Salinity.**

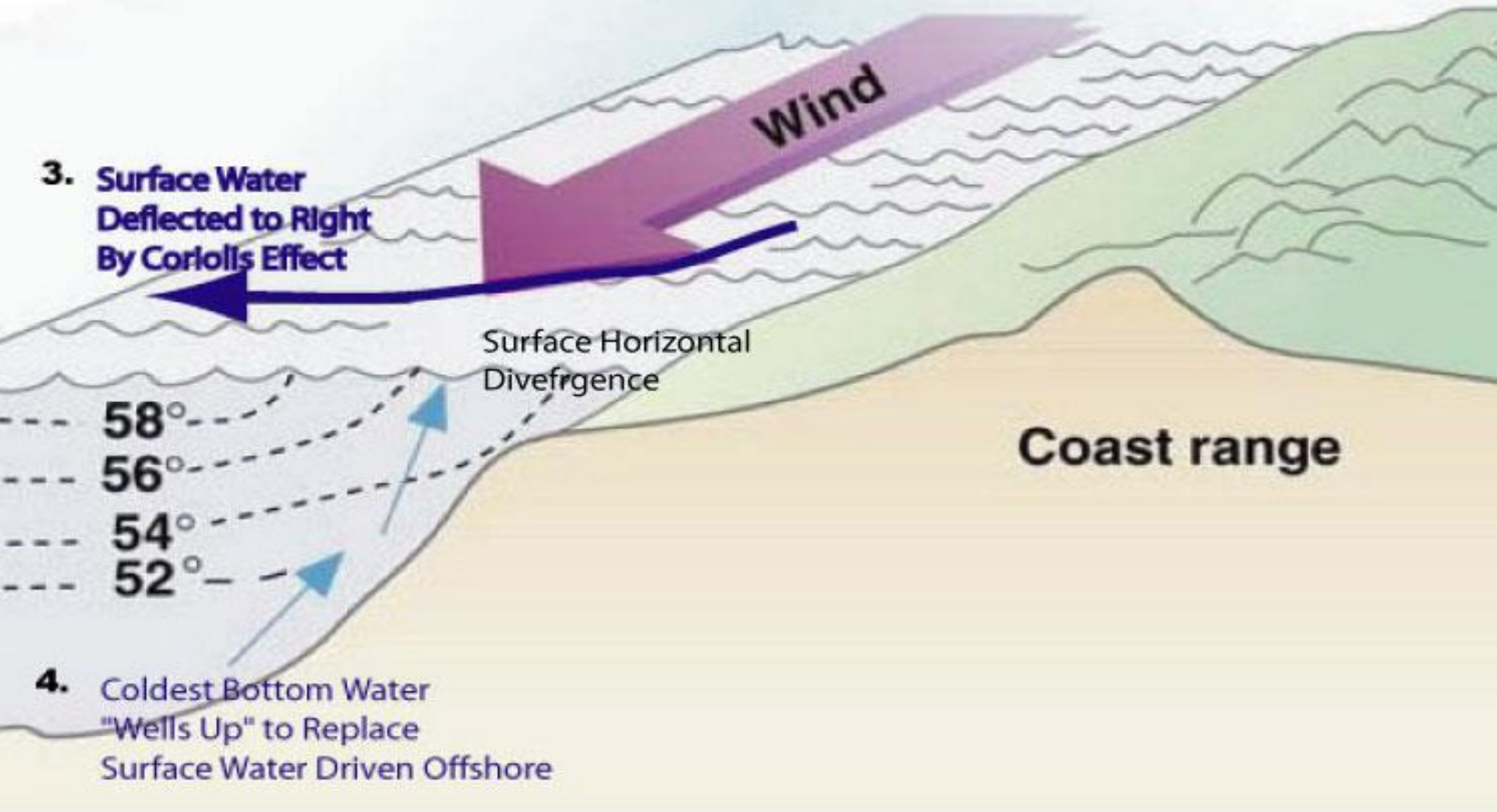
**2.**  
**Wind;**  
**Horizontal and**  
**vertical sea currents**

**The Upwelling:**

<https://oceana.org/blog/watch-upwelling-secret-ingredient-productive-oceans>



1. **Summer Afternoons -- Northwest Increase In Speed**
2. **Surface Winds Begin Driving Surface Water Southward**



3. **Surface Water Deflected to Right By Coriolis Effect**

Surface Horizontal Divergence

Coast range

4. **Coldest Bottom Water "Wells Up" to Replace Surface Water Driven Offshore**

# Krill - Zooplankton



# Biodiversity in national waters

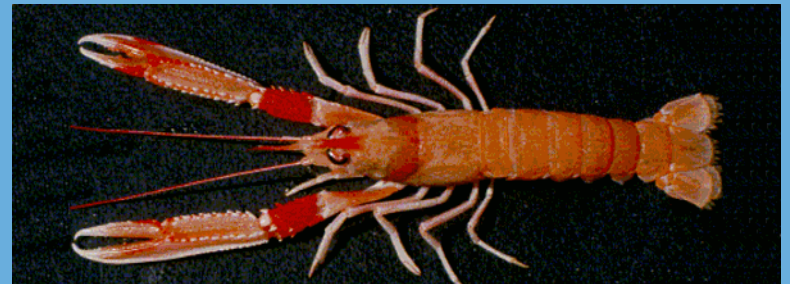
Fish: horse mackerel



Mollusc: octopus



Crustaceos:  
Langoustine/crawfish



# Blue whale in Azores waters



# Moon fish in Algarve waters



# Biodiversity in Portuguese waters



# Dolphins in the Portuguese sea





But the sea is also very present in Portuguese culture, literature, music, art, gastronomy...

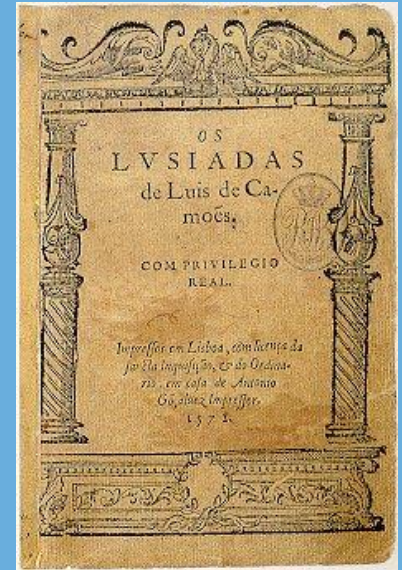
**It's our Cultural Heritage  
Let's discover**

# *The Lusiads*, Luís de Camões

*“The seas, never by seaman crost”*

*“Giving new worlds to the world”*

*“I saw clearly seen”*



These are striking verses.

They emphasize the role of navigators in connecting the seas.

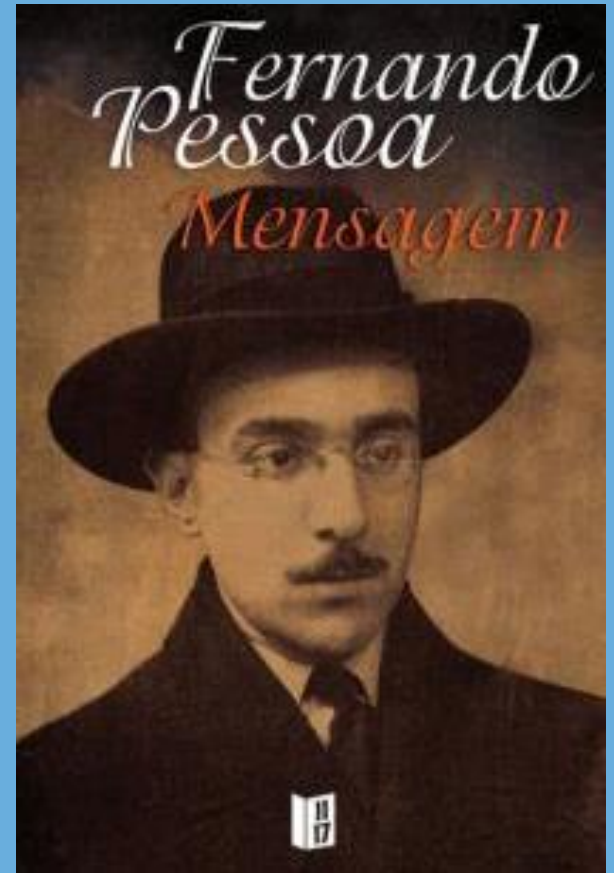
They point to the importance of experience for knowledge in the Renaissance.

# Message, Fernando Pessoa

*“Oh salty sea, so much of your salt  
Is tears of Portugal!”*

In the 20th century, the sea remains timeless in Portuguese poetry.

Fernando Pessoa pays tribute to all those who venture into the sea.




*Sardina-pilchardus*



and so begins **the story of the sardine**

<https://youtu.be/heJ9q9bKfpE>



An underwater photograph showing a school of fish swimming in clear blue water. The fish are of various species, including some with prominent heads and others that are more slender. The background is filled with soft, out-of-focus coral reefs. The overall lighting is bright and natural, typical of a clear day underwater.

Thank you for your attention  
Let's navigate...